VOLUME I - NUMBER 3 MAY - JUNE 1940

PSYCHOSOMATICS

OFFICIAL PUBLICATION
OF THE
ACADEMY
OF
PSYCHOSOMATIC
MEDICINE

A
JOURNAL
EXPLORING
THE ROLE OF
PSYCHIATRY
IN THE
DAILY
PRACTICE
OF
TOTAL
MEDICINE

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PSYCHOSOMATICS

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Editorial

If the current issue of *Psychosomatics* and further issues to come give the reader the impression that the problem of emotional depression is being emphasized, we must confess that this is not merely an impression; it is the real truth. The reason is quite clear: Sadness, despair, and feelings of hopelessness are becoming increasingly amenable to therapeutic intervention. Not only is this evident in the severe depressions seen by the state hospital psychiatrist, it is also becoming part of the experience of the general physician and non-psychiatrist.

Some of the current drugs are useful in "neurotic or reactive" depression, a state of affairs to which man is universally vulnerable. Others have a greater value in "endogenous" depression, a more serious situation in which the possibility of suicide must always be kept in mind. Although electroshock therapy is still considered the best treatment in these severe depressions, some of the current antidepressants have lessened the need for electroshock therapy in many, and have permitted a decrease in the number of required treatments in others. There is also increasing evidence that these drugs enhance the value of psychotherapy, since a patient who is less depressed is more easily reached by his physician.

The differential diagnosis of depressive states is still controversial in psychiatric circles, but most important for the non-psychiatrist is that he quickly recognize the differences between those with whom he can communicate effectively and those who should be referred for psychiatric evaluation and therapy.

A most important area, still untapped to a great extent, is the problem of "masked depression." These patients rarely see a psychiatrist, since they are prone to deny their true feelings. The presence of "legitimate" somatic symptoms and proven somatic disease permit them to use their somatic illness to express emotional needs. Thus, if it weren't for the asthma, obesity, diabetes, arthritis, slipped disc, hypertension, coronary insufficiency, skin disease, colitis, or duodenal ulcer, etc., the patient feels he would be perfectly fine. Unfortunately, his doctor frequently misses the "masked depression" due to his pre-occupation with the signs and symptoms of definitive somatic illness and his need to perform and constantly reevaluate the evidence. Yet when this proven disease is treated with all the specific and non-specific remedies available, the patient nevertheless remains ill. Treatment of the somatic condition has failed to reach the true basis of the patient's need for medical help—his depression. Failure to diagnose this may be as disastrous as failing to diagnose an acute coronary occlusion.

The doctor must learn to recognize the cues to the diagnosis of depression. He must be alert to the expression of feelings of hopelessness and helplessness; he should observe the patient's attitude, speech and behavior. In out-patient clinics, an interesting sign may be the "thick chart syndrome." This is the patient who is shuffled from doctor to doctor and from clinic to clinic for the magical cure that never comes. In private practice this happens less frequently because the patient who fails to be helped by one physician usually seeks help elsewhere, sometimes at the hands of the chiropractor, naturopath or high colonic expert.

In treating these patients it is obvious that the doctor must first be aware of what is going on in his patient before he can communicate this to him. He can then proceed with "total" therapy, using the newer drugs as adjuvants in his attempt to meet both the somatic and psychic needs, providing he feels comfortable enough to do so. In the absence of the need for psychiatric evaluation and treatment, this rightfully falls within the therapeutic scope of the general physician.

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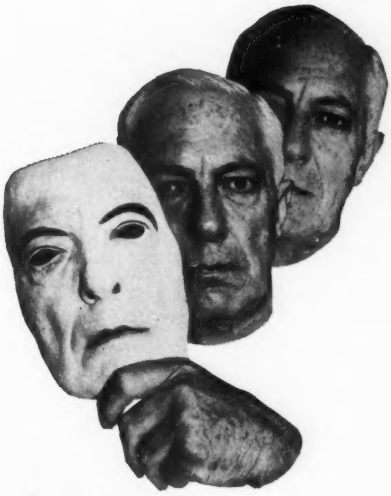
New agent for parkinsonism



Akineton

brand of biperiden

PARKINSON'S DISEASE
postencephalitic — idiopathic — arteriosclerotic

DRUG-INDUCED EXTRAPYRAMIDAL DISORDERS
parkinsonism — dyskinesia — akathisia

MUSCULAR SPASTICITY NOT RELATED TO PARKINSONISM

ACTION	Frequently diminshes akinesia, rigidity, and tremor with subsequent improvement in coordinated movement, gait, and posture. Masklike face disappears. Salivation and oily skin are decreased. Oculogyric crises are often lessened in intensity and frequency.
SIDE EFFECTS	Minimum (mainly dry mouth or blurred vision).
DOSAGE	**Individual adjustment of dosage is necessary in all instances.** Dose range extends from 2 mg. tc 24 mg. daily, in divided doses.
AVAILABLE	Supplied as the hydrochloride salt, 2 mg. bisected tablets, bottles of 100 and 1000.

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1. Rosen, H.: *Am. J. Psychiat.*, 107:917, June 1957.
2. Gesell, A., and Ilg, F. L.: *The Child from Five to Ten.* New York: Harper & Bros., 1946.

Abbreviations should conform to the style used in the Quarterly Cumulative Index Medicus.

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PSYCHOSOMATICS

Official Journal of The Academy of Psychosomatic Medicine

The Dynamic Working Hypothesis in Psychotherapy

VICTOR SZYRYNSKI, M.D., PH.D.

Diagnostic hypothesis is a basic part of medical logic. Every practitioner attempts to formulate his diagnosis after hearing the first words of his patient or even watching the patient entering the consultating room. Good doctors are also flexible and are ready to change their opinions with the advent of any serious evidence disproving the initial guess. Some medical teachers will even advance this diagnostic working hypothesis at the very beginning of their contact with patients: my professor of gynecology taught his students that every woman who enters her gynecologist's office is pregnant and suffers from cancer, and that no further diagnosis should be considered until these two conditions have been carefully excluded. A certain well known neurologist has maintained that every patient complaining of headache has a brain tumor or subdural hematoma unless proven otherwise.

Ordinarily, however, we formulate our working hypothesis according to the presenting symptoms of the patient; we think of anemia, tuberculosis, leukemia or neoplasm in patients complaining of extreme fatigue. We suspect amebiasis, dysentery, pancreatic dysfunction, etc., in patients complaining of diarrhea; we would obviously suspect tetanus in a patient appearing with severe painful trismus or "lockjaw."

We hardly ever think in terms in which clinical symptoms and signs are manifestations of specific psychological situations or where emotional problems give rise to some characteristic clinical syndromes.

Let me introduce my discussion with two characteristic case histories:

Case 1. A 20 year-old-girl was admitted to the hospital on Sunday night with severe spasm and pain in the muscles of mastication. The receiving surgeon suspected tetanus but settled for the diagnosis of mandibular subluxation and reported that he had to correct this dislocation three times during the same night, until the pain and spasm slightly subsided. The girl apparently talked with great difficulty, swallowed with marked discomfort and was persistently licking her lips, complaining of dry mouth. She was referred for neurological consultation.

When I saw her the following afternoon she was already quite improved, although still complaining of stiffness in her jaw and difficulty in swallowing. She was a small, pretty girl, very quiet and reticent, but generally pleasant and cooperative. After first putting the patient at ease, I asked her directly:

"Tell me, what happened to you on Sunday?"

Her eyes filled with tears and she told me that her boy friend decided to stop seeing her; that she was upset by this blow and in a few hours' time developed her symptoms. Dynamic working hypothesis formulated at this point called for a history of traumatic separation from the idolized father, which would render the girl exceptionally susceptible to rejection by any other male. Also, I hypothetized an inadequate mother who was either very indolent or too distant from the girl, thereby preventing any identification with her with no chance of developing adequate ego-strength. The subsequent questioning revealed a history of a broken home with separated parents and emotional difficulties roughly similar to the expected ones. The girl was working away from home for the last year. Supportive psychotherapy, guided by the diagnostic dynamics, brought about recovery from this short hysterical episode.

Case 2. During a clinical conference at the family agency the social worker reports on the history of marital conflict in a family. There is a submissive and evasive husband who, although being ten years older, is persistently dominated by his wife who rules at home and administers the money. His only escapes are occasional drinking bouts for which he is usually punished

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Presented at a "Symposium on Psychotherapy" before the Sixth Annual Meeting of the Academy of Psychosomatic Medicine in Cleveland, Ohio.

From the University of Ottawa, Ottawa, Canada.

by being expelled from home for a few days. He accepts all the blame and begs his wife's forgiveness. In talking with his social worker he never offers any criticism of his wife and admits all her accusations with extreme submissiveness.

At this moment the consultant psychiatrist comes up unexpectedly with a question.

"And for how long has this man been suffering from diarrhea?"

The astonished social worker admits that one of the complaints presented by her client's wife was that he always dirties his pants; that he has been suffering for years from chronic loose stools. The worker requests explanation of the psychiatrist's question.

It is only a dynamic working hypothesis. This man obviously has no guts. To quote Weiss and English "those lacking courage move their bowels under the influence of fear, rather than attacking the enemy in the usual fashion. Instead of using the voluntary muscles there is regression to a childish symbolic expression of aggression through the bowel."[1]

Sir Francis Walshe used to say that a diagnosis should be made on the evidence of positive findings and not because previously suspected conditions were not found. This applies particularly well to psychosomatic conditions, in which so often a psychological origin of symptoms is suspected only after the meticulous search for organic factors has failed to account for the condition, or—even worse—is never considered because some positive organic findings were obtained. In the latter case their basic emotional origin is often disregarded.

In approaching his patients from the psychodynamic point of view every practitioner should consider the following steps, which would markedly facilitate his task:

1. Always to *remember* about a possibility of:

(a) psychological origin of, or—
(b) psychological component in a great number of presenting conditions.

2. To *discover* the real psychogenic origin of symptoms in terms of:

(a) the present emotional conflict, and/or
(b) the past experiences responsible for the present structure of personality, particularly for oversensitivity to certain life situations.

3. To *find out* the psychological side of many somatic conditions, i.e., the *meaning* of the symptoms to the patient and his attitude towards the whole presenting situation. Any skilled and adequately self-confident practitioner should not hesitate to ask his patient: "Are you worrying about your condition?", "What do you yourself think is the matter with you?", "What is your own diagnosis?", "How serious do you think your condition is?", "How do you think I am going to help you?"

Many significant fears, anxieties and erroneous "preconceived ideas" may be discovered in this way and can often be removed through little effort but resulting in marked relief for the patient.

4. To *break through* the resistance of the patient and his unwillingness or inability to open up. This is usually due to:

(a) the "magic fear" of naming and defining his frightening anticipation (e.g. cancer, insanity, etc.);
(b) inability to verbalize a threatening or shameful experience (e.g. sexual guilts or deviations, venereal diseases, "unreasonable" fears, humiliating phobias, etc.);
(c) lack of confidence in the doctor;
(d) lack of support from the doctor.

A patient may go through all the examinations and tests for infertility before admitting that she simply has had no sexual relations with her husband because of some emotional inhibition caused by psychological trauma in childhood.

It is, however, important to be on our guard when faced with an excessively frank and "wide open" patient, who promptly discloses his or her most intimate problems. Many of them belong to three main categories:

—hysterical patients, whose attitude is characterized by "blissful indifference" and who would describe with an obliging smile their most unpleasant experiences;
—patients whose main defence is "intellectualization"; they attempt to explain everything in a sophisticated manner, based on their often extensive reading of popular medical and psychological literature. It usually takes an expert to remove this intellectually produced smoke screen and to reveal their real feelings;
—some schizophrenics with markedly "flattened" affect may appear devoid of natural emotional inhibitions.

On the whole it may be said that better therapeutic rapport and more gratifying results are usually obtained with the patients who require reasonable effort on the part of the therapist to remove their inhibition and to establish slowly a relationship of mutual trust and respect.

5. To *remember* about the therapeutic meaning of the *relationship* between the patient and his doctor. For the patient, a visit to the doctor's office is often a unique, unforgotten experience. Every remark of the doctor is often remembered for years, quoted to relatives and friends, occasionally becoming part of their life orientation. Doctors should often remind themselves of this difference in experience and make an attempt to treat every patient as if he were the only one they have in their life and not just a "next, please." In particular, doctors should watch for any situation, where by a wrong gesture, expression or decision they may *reject* the patient, who may become deeply disturbed by such an experience. However, the problems of doctor-patient relationship require a special paper. To put it briefly, we may say that discipline is equally as important in this situation as it is in the upbringing of children; in both situations discipline and rejection are two very different things, although quite often confused.

In good medical practice psychodynamic diagnostic hypothesis should be entertained from the very beginning, along with the organic suspicions. It is usually based on two fundamental premises.

1. Certain symptom-patterns are characteristic for more or less specific emotional situations;

2. Psychosomatic conditions develop in individuals:

—with some actual traumatic life situation, and
—against the background of some characteristic life history, which accounts for the psychodynamic characteristics of a given individual.

According to the above principles, a psychodynamic working hypothesis is arrived at by inquiring into:

1. Immediate areas of stress:

—home: parental or marital conflicts, debts, illnesses;
—work: frustrations, failures, overwork;
—recreations, if any: hobbies, social life;
—sexual adjustment, guilt, conflicts, frustrations;
—life philosophy, religious orientation;
—alcohol, drugs or other "escapes" from stress.

2. Past life history:

—parents, atmosphere at home, identification with parents, excessive attachment, rejection, guilt and hostility, loss through death or separation;
—siblings: rivalry, attachments, number, sex and age;
—process of "weaning away from home"—successful or ridden with guilt and/or hostility.[2]
—history of sexual adjustment: sexual fears, psychopathological experiences, intensity of sexual guilt, sexual enlightenment, attitude of parents towards sex matters.

3. In a deeper, analytically oriented inquiry:

—content of dreams and day-dreaming,
—free associations,
—projective psychological tests.

However, the true "dynamic working hypothesis" is usually formulated on the basis of presenting symptoms before detailed inquiry is made. It is usually derived from our present day knowledge of psychosomatic principles.[3,4] In this way, when faced with a patient complaining of symptoms suggestive of peptic ulcer, along with the organic hypothesis, we suspect him of being a hard driving, ambitious individual or a hypercritical, disappointed, frustrated and "sour" person. A man complaining of dizzy spells, giddiness, fear of height and of open spaces may be suspected of hypertension, brain tumor, labyrinthitis, but also of occupation insecurity, working in an overcritical atmosphere and assuming responsibility beyond his capability. A patient with asthma may suffer from some particular allergy, but may also give a history of a cold, inaccessible and efficient mother, followed by marriage to an overintellectual, self-centered, frigid and overcritical woman. I am still to see a man complaining of cardiac neurosis, who would not cherish an immature, aggressive desire to "kill" somebody, to get rid of

the obstacle frustrating his progress in life and the achievement of his strong emotional goals; apparently such an aggressive wish, turned inward, produces fear of dying from a heart condition. Finally, any psychosomatic disorder appearing characteristically when the patient is away from home or threatened with separation from his permanent abode or from his family, points to a very traumatic and "unresolved" process of "weaning away" from the parental home.[2]

Ability to formulate a dynamic diagnostic hypothesis enables the therapist to improve his results by:

—*saving considerable amount of time;* dispelling the old, erroneous idea that a psychodynamic approach to the patient is very time consuming and costly;

—*keeping "a few steps ahead"* of the patient, i.e. understanding better his emotional problems and knowing more about their nature than the patient does himself. This enables the therapist to guide the patient properly towards better insight into his own personality;

—*avoiding frequent errors* of disregarding psychological dynamic components in psychosomatic conditions or even in many other "organic" illnesses.

Having formulated a dynamic working hypothesis the two basic principles in its application should be very carefully observed.

1. It should *always be flexible.* When you test it by further inquiry, you should always be ready to change it with any new important evidence. This is also an important test of the maturity of the doctor. Well adjusted, intelligent therapists never attempt to force the patient to accept ideas; never push them down the patient's throat. They are flexible enough and adequately secured and self-confident to follow their patients very attentively, and never miss an opportunity to be guided by the patients and to learn from them. Dynamic working hypothesis in the hands of a rigid physician is more of a hindrance than a help.

2. The dynamic diagnostic hypothesis *should never be disclosed directly to the patient.* Most patients should be carefully prepared to see the unconscious working of their own mind. It often takes a number of months to build their ego-strength. It is hardly beneficial to attempt to impress the patient with a statement like this: "I know what is wrong between you and your husband—you cannot abandon your fixation on your father, because he was your first love-object," or: "You have your colitis because your mother castrated you in your childhood," or: "I know why you developed your heart condition after your son's marriage; it is so simple—after your husband left, you made your son assume the place of your lover, and now you wish to kill his wife who took him away from you." Most certainly, besides the very short-term ego-inflation of the imprudent doctor, only adverse effects may be expected from such an explanation.

There is, however, one situation when a well conceived working hypothesis may be brought promptly to the patient. This is usually done only by experienced specialists in analytically oriented therapy and serves the purpose of reassuring the patient of her therapist's freedom and his ability to handle even very delicate matters. Instead of disturbing the patient it serves the security-giving purpose: the patient feels more secure with the analyst who handles the usually traumatic material with his sure, strong hand and with great, reassuring freedom. Of course, this requires very competent assessment of the patient's ego-strength and is usually done in an indirect way without involving the patient personally: "I have seen girls who were afraid of having children when they had some upsetting sexual experience in their early childhood and became afraid of 'magical' punishment." "Many young adults have very disturbing nightmares when they still worry about improper sexual play while in boarding school"—this obviously replaces direct questioning of the patient about traumatic emotional experiences which may be suspected in our working hypothesis and makes him volunteer more freely much of his disturbing and anxiety producing material.

What is, therefore, the proper way of utilizing our working hypothesis in treatment? When our goal is helping the patient to understand and to handle his emotional problems in a more mature way,[5] we should guide him, without rushing, to notice and to understand the relationship between his emotional history and his presenting symptoms.

This is done through:

ventilation,
interpretation,
insight-formation,
assimilation,
eventual further uncovering.[6]

As soon as the patient has been guided to mention some of his emotional problems, let him talk about it; let him *ventilate* freely for a while. When he is doing it, try to amplify your working hypothesis.

In the second step lead him with careful questions to see some relationship between his emotional experiences and his symptoms. Help him to *understand* certain basic psychosomatic mechanisms e.g. overactivity as a defense factor, which stops functioning during periods of rest: "I just cannot understand why my attacks always hit me when I am resting or relaxing. I hardly ever have them at work or when I am really busy or tired. It doesn't make sense to me."

Gradually, the patient will be able to gain *insight*—to see the relationship between symptoms and feelings. With your working hypothesis at hand, you may guide him to the fields of his life situation or life history which you consider the most significant in the development of his disease. You may save a lot of time and much unnecessary groping in the dark; as well as overcoming in this way some stubborn defenses of your patient.

Case 3: An intelligent woman of thirty with serious emotional problems and recurrent neurodermatitis discussed at length during psychotherapy her early relationship with her mother. When asked about her father she would brush it aside: "Oh, this is of no significance, he was an engineering consultant, always traveling, I hardly saw him"—and she would promptly return to her mother. Only after some effort in bringing the patient to discuss her feelings related to paternal deprivation could significant progress in therapy be made.

Helping the patients to *assimilate* their newly gained understanding requires some repetition of significant discussions and reventilation of important feelings. Here again, the diagnostic dynamic hypothesis would assist in selecting the special topics.

When deep psycho-analytical *uncovering* is contemplated—which should be obviously done by an expert and is only mentioned here for completeness—a working hypothesis becomes an even more important tool for correct interpretation of the patient's dreams, day-dreaming, free associations, transference phenomena, etc.

We should honestly admit that in psychosomatic medicine there is still much more research needed to make our dynamic diagnostic assumptions more validly based on comprehensive scientific evidence. At the present time there are still two basic concepts to explain the nature of psychosomatic disorders: while some emphasize specificity of a life situation (e.g. Franz Alexander[4]), the others are more concerned with the influence of specific personality patterns (e.g. Flanders Dunbar[7]). Regardless of which trend we may be inclined to adhere to, every individual patient should always present an individual challenge to our dynamic understanding of his emotional pathology and his individual patterns of reaction. On the other hand, many extremely valid generalizations may be derived from the impressive body of psychodynamic and psychosomatic research and from our personal experience with the more or less typical reactions of the human beings in our cultural environment.

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General Experience with B-Phenylisopropylhydrazine (Catron), an Antidepressant Drug

JOHN KINROSS-WRIGHT, M.D.

Until a few years ago chemical means of treating mental depression were limited both in number and effectiveness. A few of the sympathomimetic phenylalkylamines were found to be useful because of their analeptic properties in partially relieving mild depressions. Amphetamine and methamphetamine were most powerful. However, their brevity of action and unpleasant side effects when used in effective doses led them into general disrepute. Electroshock treatment, successful in at least two-thirds of endogenous depressive illnesses remained the treatment of choice. However, in other types of depression it was unsatisfactory. Despite its twenty year history its mode of action remains a mystery.

Belief in a neurochemical explanation for the occurrence of depression persisted with interest centering largely around the neurohumoral equilibrium of the nervous system. With this starting point Biel and his associates[1] at the Lakeside Laboratories investigated the structure-activity relationships of many synthetic phenylalkylamines. They later reasoned that replacement of the amine radical by a hydrazine group might increase the resistance of the compounds to enzymatic degradation within the organism, and have greater affinity for receptor sites. Furthermore since iproniazid, which also contains a hydrazine group, had been shown by Zeller[2] to be a potent mono-amine oxidase inhibitor, Biel investigated this property of his new compounds. In a brilliant paper[3] he and his colleagues describe their identification of beta-phenylisopropylamine. This substance, Catron, is closely related to amphetamine (Fig. 1) and has similar analeptic properties in rabbits. In vivo it is about 50 times more potent as an inhibitor of amine oxidase than iproniazid. Horita[4] has shown a preferential effect upon brain enzyme which is inhibited at concentrations too small to produce liver inhibition. Inhibition of the enzyme is both rapid and prolonged, the effect of a single dose lasting up to one week.

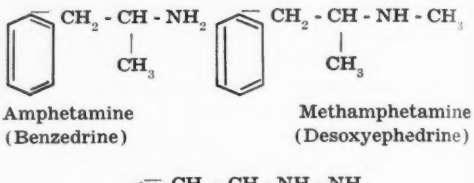

Figure 1.

Effects upon behavior in animals are qualitatively similar to those seen with other potent amine-oxidase inhibitors. They include a pressor effect and central nervous system excitation. At the same time there is a marked rise in the norepinephrine and serotonin content of the brain. In animals, pretreatment with the drug produces a reversal of the sedative effects of reserpine.

Since iproniazid had already proved to have very valuable antidepressant properties in man, Catron was given a clinical trial and a number of favorable reports have been made.[5-7] It also has been found useful in the treatment of angina pectoris,[8] rheumatoid arthritis[9] and hypertension.[10]

This paper reports upon 73 patients treated with Catron* (JB-516). The majority of them manifested depressive symptoms, three had schizophrenia without depression and nine were classified as anxiety or tension states without depressive symptoms. Treatment of this latter group was prompted by the feeling of well being and relaxation described by some of the earlier group of depressed patients while taking the drug.

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Presented at the Sixth Annual Meeting of the Academy of Psychosomatic Medicine, Cleveland, Ohio.

Classification of depressions has long been a matter of controversy. The hope that response to chemical antidepressants might clarify nosology has not yet been realized. Electric shock treatment, despite its anticipated lack of specificity actually does separate depressions into two broad classes with some precision. The endogenous and involutional depressions show a consistently good response in contradistinction to the reactive depressions where EST not infrequently makes patients worse. The author's experience, contrary to that of others with non-convulsive shock therapy and other variants, has not been any more favorable with the reactive depressions.

Endogenous and involutional depressions may be roughly characterized by evidence of genetic influences, with associated general biological disturbances, a preponderance of depressive over anxiety symptoms in most cases, a tendency to recurrence and a minimum of external precipitating incidents. Endogenous depressions are also widely known as manic-depressive disease. Reactive (called by some, psychoneurotic depressions) are mostly antithetical in these respects. Involutional depressions may be separated out from the other endogenous depressions by the greater disintegration of the personality, the age group in which they occur and their greater chronicity. The other categories of depression listed in Table I need no explanation. Again it should be stressed that differentiation of many cases of depression is exceedingly difficult. Unanimity among psychiatrists is only to be expected in very clear-cut and typical cases. Hence a comparative evaluation of reports indicating differences in the response of one or another type of depression to antidepressant drugs requires caution.

METHODS AND RESULTS

The first patients in this series received a dosage of Catron ranging from 12.0 mg. to 50 mg. daily. It appeared that this was too high and evoked serious side effects. Later patients in the series received a starting dose of 6.0 mg. to 12.0 mg. daily, and after improvement had appeared, a maintenance dose between 6.0 mg. each day to 6.0 mg. twice weekly. The long inhibition produced by Catron makes infrequent dosage possible. The direct short-lived amphetamine-like stimulant effects of Catron are seen in only an occasional patient, are not of therapeutic significance and hence do not need to limit frequency of administration. Treatment has continued for as long as five months although average duration was two months.

TABLE I

Catron—Clinical Results

Diagnosis	No. Pts.	Clinical Response: Excellent	Fair	Poor
Depression—Endogenous	25	16	2	7 (2)
Involutional Melancholia	6	3	1	2
Depression—Reactive	22	13	3	6 (2)
Depression Associated with Organic Brain Disease	3	1	–	2
Depression with Schizophrenia	5	1	2	2
Schizophrenia with Apathy	3	–	1	2
Anxiety—Tension State	9	3	3	3 (1)
Total	73			

Numbers in brackets indicate cases where side effects necessitated termination of treatment.

Response to treatment is graded in three categories. *Excellent* means lasting relief of depressive symptoms, return of feelings of well-being and resumption of pre-morbid activities. *Fair* response includes those who received definite but not complete relief of symptoms. It also includes those who showed marked improvement when taking Catron but relapsed after it was withdrawn. A *poor* response is self-explanatory. It can be seen in Table I that the endogenous depressions responded best although involutional melancholias and reactive depressions are not too far behind. Of the 61 patients in the series who showed depression of one form or another, 56% were graded excellent and a further 15% as fair. These over-all results are better than might have been expected with EST. Taking the endogenous depressions alone, however, Catron proved inferior to EST. It should be noted that a number of these patients had in the past failed to respond to EST, mostly reactive depressions. Others had recovered with EST in previous attacks of depression and did likewise in their present episode with Catron. Needless to say, this group of patients was unanimous in their preference for the latter method of therapy on grounds of convenience,

comfort, speed and economy. Two patients diagnosed as having manic-depressive disease have each been treated twice with Catron for two distinct episodes of depression in 1958 and 1959. Response to the drug was identical and successful on all four occasions.

SIDE EFFECTS

One of the three anergic, withdrawn chronic schizophrenic patients became excited, hyperactive and belligerent on Catron but relapsed into his former state when it was withdrawn.

In one-third of the patients with anxiety, tension and psychophysiological dysfunctions as the major symptoms and without significant depressions, symptoms were largely abolished. One-third experienced moderate improvement. Two patients became more tense.

TABLE II

Catron—Side Effects

Dryness of Mouth	Weakness
Constipation	Excessive Sweating
Insomnia	Nervousness
Difficulty in Micturition	Local Edema
Orthostatic Hypotension	Syncope
	Peripheral Neuritis
Delay in Orgasm	Dermatitis
Blurring of Vision	Optic Neuritis

Side effects tend to occur at the same time as symptomatic improvement of the depression. The most prominent is hypotension, in some cases severe enough to cause dizziness and syncope. The drop in blood pressure is seldom more than 30 mm. systolic. However, in hypertensive patients the drop is greater and more distressing. It is of the orthostatic variety. The mechanism of this effect is not clear since a pressor response is usually found in experimental animals. It has been suggested[1] that enhancement of the hypotensive action of dopamine or, alternatively, a greater affinity for the blood pressure regulating centers of Catron over norepinephrine may be responsible. Symptoms referable to autonomic blocking are constipation, delay in micturition, blurring of vision, dryness of mouth and mild facial and ankle edema. Delayed ejaculation is not uncommon. In the anxiety tension patients where premature ejaculation is often a problem, this effect offers a distinct therapeutic advantage. However, on larger doses it may lead to total inability to achieve orgasm. In one patient failure to abolish this effect by reduction of dosage necessitated cessation of treatment. Excessive sweating, usually unpleasantly odorous, was noted by several patients. In most individuals taking Catron there is a reduction in sleep requirements without increase of fatigue. In three patients this amounted to frank insomnia and caused difficulties. One patient developed a maculopapular rash. Two patients, both female, exhibited neurological disturbance on 25 mg. daily. In one this was restricted to weakness in the lower extremities with marked ataxia. Reflexes were unchanged. The symptoms receded two days after withdrawal of Catron. In the second, ataxia, nystagmus, slurring of speech and moderate weakness in all four limbs appeared in the fifth week. Reflexes were within normal limits. The condition resembled a cerebellar ataxia. It slowly receded during the next six weeks. High doses of B vitamins did not appear to accelerate recovery materially. However, the effect of massive dosage of pyridoxine was not tried. Finally, the first patient mentioned above, who was also moderately hypertensive, was stricken at the same time with bilateral blurring of central vision and disturbance of red-green color discrimination. This effect has also been noted in a series of patients reported by Gillespie.[11] There were no objective findings and the condition disappeared following change of medication. There were no cases of hepatic toxicity in this series. Virtually all these side effects were dose related. With the present dosage regimen not in excess of 12 mg. daily, with maintenance at the smallest feasible dosage, troublesome side effects are rarely encountered except in hypertensive patients. On the other hand, it is worth mentioning the case of an inquisitive and audacious physician who took almost 75 mg. daily of Catron for about six weeks. He noted visceral side effects, symptomless orthostatic hypotension, a great feeling of well-being, and enormous energy on three to four hours sleep at night. His work during this period was commented on favorably. However, toward the end of the period he noted increasing lassitude and lethargy. During his course of Catron he had occasion to take a 25 mg. tablet of phenmetrazine (Preludin). Within an hour he had a syncopal attack and his blood pressure was found to be

70/40. Later he repeated the phenmetrazine with the same violent drop in blood pressure.

In a number of patients phenothiazine derivatives were added to Catron. There was no evidence of interaction between the two compounds. This was also true with barbiturates used for nocturnal sedation.

The clinical response to Catron appears to be generally similar to that of other mono-amine oxidase inhibitors. It appears between the fourth and twentieth days. Where it is delayed beyond this time, it is doubtful whether it should be attributed to the drug, at least without critical appraisal, for depressions not infrequently remit spontaneously without treatment of any kind. Clear-cut central stimulation of the sympathomimetic amine type was seen in only one case. The stimulation lasted about six hours after each dose of Catron (6.0 mg.) and approximated that to be expected with 10 mg. to 15 mg. of amphetamine. The only unusual factor in this case was that he was taking sizeable doses of an anti-spasmodic (Bellergal, 6 to 8 tablets daily).

SUMMARY

Catron (Beta phenylisopropyl hydrazine) is a very potent and long acting mono-amine oxidase inhibitor. Used in the treatment of 73 cases of which 61 were depressed, it caused excellent remission in 56%. A further 15% were rated as having a fair response. Three withdrawn apathetic schizophrenics showed little or no change. In a series of nine patients with anxiety tension symptoms without depression, two-thirds showed moderate to excellent improvement. Side effects are reported, although they are rarely troublesome with the low doses necessary for favorable therapeutic outcome.

*Catron was supplied by Drs. H. L. Daiell and Dr. H. M. Leyland of Lakeside Laboratories.

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In the present stage of our psychiatric knowledge we are like the physician of some 25 years ago, who, when confronted by a patient with lobar pneumonia, could diagnose the condition and then tell the patient or the family that the illness would last about ten days, and then either resolve or become worse. He might apply a poultice to the chest. Such action served as psychotherapy for the physician, the patient's family and the patient. . . . He might visit the patient several times a day and ask him where he had been to contact this pathogenic microbe . . . and what in the patient's life might have rendered him susceptible. . . . He might talk to the patient until the latter recovered or died. . . . Perhaps we psychiatrists are still at this state. . . . Present research makes me feel extremely modest over my psychotherapeutic abilities and happily optimistic over the possibilities of the psychiatric equivalent of antibiotics to come.

H. Angus Bowes, M.D.

Diseases of the Nervous System, March 1960.

Advising the Pediatricians on the Feasibility of Psychotherapy

PAUL PAINTER, M.D.

The question of which patients should be referred for psychiatric care and which need not be, is one that comes often to the pediatrician's mind. Pediatric practice, having matured to a more preventive status, must now concern itself more often with family and social problems. Matters ranging from abdominal pain of anxiety to the school failure of negativism frequently come to the pediatrician's attention. Examination, prognosis and recommendation are required, and in turn require a prediction of what might well happen in the course of the child's disorder. One may confirm the parents' anxiety in appropriate cases, and recommend treatment for the disorder. One may diminish anxiety by reassurance that all will be well. Of course, the best reassurance is a good prognosis.

This study is aimed toward learning a little of the natural course of emotional disorders. It is just as important to avoid medical treatment where it is not indicated as it is to give it when it is. The clinician recognizes that sometimes spontaneous improvement occurs. Further, benefit from child psychiatric treatment is certainly not automatic[1,2] so that proper choice of cases for psychotherapy is important.

One hundred consecutive cases referred to us for out-patient child psychiatric evaluation in 1957 were examined. Almost all were referred from the private practices of pediatricians, and represent a cross-section of what they and parents think indicates the need of such evaluation. The 100 cases were divided into two groups according to the recommendation given to the parents. One was a "good prognosis" group of 28 patients, defined as those to whom a good prognosis without treatment was given, together with advice on the care of the particular presenting symptom. The remainder were defined as a "mixed psychiatric" patient group, and contained those for whom other recommendations were given. These included recommendations for psychiatric treatment, referrals to social agencies, referrals to special schools and the like. The prognosis, naturally, was also varied.

The "good prognosis" patients were contacted by telephone and interviewed for the fate of the presenting symptoms, and for any appearance of new symptoms. The average length of elapsed time at follow-up was one year, seven months, and in no case less than one year. The results are shown in Table I. "No symptoms" indicates that the original symptoms had disappeared, and no new ones or new disorder had come about; ten children were in this group. "Improved" indicates that the presenting symptoms had diminished to the point of being of no real concern to the parents; or that if the original symptoms had disappeared, there was evidence that they had changed form to a more acceptable and milder shape. There were 17 children in this group. "Same" indicates the child's condition was unchanged. The one case here was a boy who later returned for psychiatric treatment, and improved. None of the interviewed parents of the "good prognosis" patients thought their children worse, or gave material suggestive of that change.

TABLE I

One Year Follow-up of 28 Neurotic Children Given a Good Prognosis

No symptoms	10
Improved	17
Same	1
Worse	0

The question of what factors might lead the pediatrician or other physician to give a good prognosis seemed important. Members of the "mixed psychiatric" patient group varied at this point, but were otherwise matched in such factors as socio-economic group, source of referral, and the existence of a problem estimated as psychiatric. They were not systematically followed up, for many had since

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received treatment. As a point of interest, however, those for whom treatment had been recommended, but who had not followed the recommendation were spot-checked and appeared, by and large, to be the same. The "mixed psychiatric" group was gone through at random, until a control group matched for age and sex was established. Because of the limited size of the group not all matches were exact. Three matches varied more than ±3 months in age, and three did not match for sex. These were matched at random. One case was dropped for inadequate data. Social, historical, symptom and evaluation data were recorded on a McBee card so that facts and judgments were noted in a standardized manner, and were easily available.

The cards were matched as above two by two: one subject, one control. All factors were analyzed as follows: if both subject and control had or had not the same factor, it was balanced out. If one had it while the other did not, a *difference* was brought out and noted. Thus the numbers in Tables II and III are not totals, but times when, in a matched pair, differences showed up. The chi square test of significance of difference between correlated proportions was then used to establish the level of confidence.

TABLE II

Factors Associated With Good Prognosis

Factor	"Good prognosis" subject has factor — paired control has not	"Mixed psychiatric" control has factor — paired subject has not	Chi square test of significanct
Adequate academic function	11	1	p=.001
Onset less than 1 yr. previously	7	0	p=.01
Compulsive or obsessive	4	0	p=.05
Separation anxiety	4	0	p=.05
Psychoneurotic diagnosis	9	3	p=.10
First born	10	4	p=.10

Table II shows the factors associated with a good prognosis. School function in academic work is a sensitive index in this differentiation. The crude totals here were eight "good prognosis" subjects doing poorly in school, and 19 controls. An acute onset, wherein the symptoms were present for less than one year, was helpful as it often is in other fields of medicine. Two neurotic defenses were also found at significant levels, and suggest that being neurotic might not be entirely bad. Indeed, approaching significant levels was having the diagnosis of psychoneurosis. First born children appeared in the "good prognosis" group in proportions near significance.

TABLE III

Factors Associated With a Mixed Prognosis

Factor	"Good prognosis" subject has factor — paired control has not	"Mixed psychiatric" control has factor — paired subject has not	Chi square test of significance
Poor academic function	1	11	p=.001
Impulsive behavior	0	4	p=.05
Out - group identification with peers	0	5	p=.05
Out-group identification by adults	0	4	p=.05
Developmental history poor	1	7	p=.05
Hyperaggressive behavior	1	6	p=.10
Peculiar behavior	1	6	p=.10
Poor relation to parents	5	12	p=.10

Table III shows factors associated with a mixed, but not good, prognosis. Poor academic function is the obverse of the first item in Table II. This group tended not to produce in school. Impulsive behavior, the sudden acting out of internal urges or phantasies, and the out-group identification factors, were not found in the "good prognosis" group at all. Out-group identification with peers does not refer to the child's having few friends. Rather it is defined to mean the child is thought of as different by his peers, especially as a "hood" (i.e. delinquent) or a strange, unknowable, very isolated child. When adults think of the child in the same way, the next factor, out-group identification by adults was noted. A poor developmental history differentiated these groups, suggesting that organic findings worsened the prognosis. Approaching significance were three other items suggesting poorly organized personality structure. Hyperaggressive behavior was defined as attacking and fighting the environment in an excessive or inappropriate fashion. Peculiar behavior was defined as autistic, bizarre or perseverative symptoms. Poor relationship to the parents means that they were unable to handle the child's and their own behavior and interaction adequately.

TABLE IV
Diagnostic Factors

	"Good prognosis" subjects	"Mixed psychiatric" controls	Normal Curve test of difference
Total number of symptoms judged serious	13	55	p=.05
Total number of symptoms judged mild	89	89	not sig.
Total number symptoms of all kinds	102	144	p=.05
6 or more symptoms	4	11	p=.05
5 or fewer symptoms	23	16	p=.05

Table IV shows totals of symptoms in various breakdowns. These were subjected to a normal curve test of the difference. Most obvious was that the "good prognosis" group had many fewer serious symptoms, and the difference was highly significant. However, if only milder symptoms were considered, the groups were identical. Even the total number of symptoms showed a significant difference, which could then be broken down usefully to identify the two groups. The "good prognosis" group tended strongly to have five or fewer presenting symptoms, while the "mixed psychiatric" group tended to have six or more. This finding is also noted by Gildea,[3] who showed a high correlation between numbers of symptoms and severity of emotional disturbance.

DISCUSSION

The data suggested that an acutely neurotic child, if his general adjustment were otherwise good at home and school, has a good prognosis, even with remarkable and dramatic symptoms. A case in point was that of a six year old girl who was incapacitated by compulsions. She would scream for two hours and wildly fear imminent death because she couldn't remember which corner of the napkin she had used when she put it on her lap. Her compulsions demanded that she pick it up by the same corner or die. Yet she improved rapidly and on follow-up was doing very well. She was rated as improved only because she still tended to be tearful with stress. Neurotic defenses here seem to be akin to fever, an emergency measure to cope with stress, and not in themselves predicting a poor prognosis. While in this small group statistical analysis didn't allow much more to be said along this line, the trend in the data was in the direction of the good prognosis group being neurotic. O'Neal[4] notes that on 30 year follow-up of old child guidance clinic cases, the adults who were psychiatrically well came primarily from the group with neurotic problems as children.

The "mixed psychiatric" group certainly had neurotic symptoms and patterns, but as noted in Table III, the trend was toward the direct acting out of feelings. There was less of an internal battle going on to cope with life stress, and more of a primitive attack on life. The data suggest that the pediatrician might worry more about the aggressive child, than about the shy, quiet one.

In advising the pediatrician concerning the need for psychiatric treatment, one might lean more strongly toward psychotherapy for those whose symptoms are disorganizing their environment and are persistent. The medical rules of thumb about few symptoms and acute onset would apply.

SUMMARY

1. A group of patients who had been given a good prognosis without treatment and found to be doing well one year later were compared to a mixed group who were not given a good prognosis without treatment.

2. The "good prognosis" patient group tended to have neurotic symptoms, acute onset, but good academic function.

3. The "mixed psychiatric" patient group tended to have impulsive acting-out behavior and to be rejected by their society.

4. It is suggested that neurotic symptoms in children may have an encouraging connotation for prognosis, if coexisting symptoms are not too numerous or serious.

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The Psychosomatics of Low Back Pain

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Psychosomatic medicine deals with medical disturbances in which situational and emotional factors play a significant role in either the precipitation or the exacerbation of symptoms. The situations are quite often associated with unpleasant feelings of fear, anxiety, guilt, resentment, frustration and longing. These illnesses are found in persons who have conflicts in relation to the expression of hostility and anger. Quite a few of them do not have the frank symptoms of the psychoneuroses.

Extended studies indicate that these patients are people with obsessive tendencies who tend to ruminate over their difficulties and find it quite impossible to resolve them on account of indecision. It may be that these tendencies present constant stimuli to the autonomic nervous system and eventually lead to chronic irreversible reactions in the end organs, resulting in a pathologic process.

The problem of low back pain has long been a medical concern. During the war one saw many instances of it with combined organic and functional backgrounds. In civilian life, low back pain is encountered in daily practice with some frequency. Physicians have long recognized that emotional disturbances are important predisposing etiological factors in low back pain.

The fact that these patients express and discharge unconscious emotional tendencies through the voluntary muscles, puts their symptoms in the category of hysterical conversion, namely, the expression of an unconscious conflict by somatic changes in the voluntary muscles. The production of psychogenic low back pain is often the result of unconscious stimulation of the voluntary muscles of the back.

Increased muscle tension in the back muscles may exist as a contraction in a muscle belly where its presence can be detected only subjectively, as pain, a pulling sensation, or a tight sensation, or there may be actual interference in the balanced action of muscles in physiologic antagonism. Frequent brief periods of increased muscle tonus may cause repeated minimal irritation to the weight bearing surfaces of the vertebral joints, and prolonged increased muscle tension in addition, may cause chronic alteration in these joints. Studies on capillary circulation and the arterioles may reveal that the same psychologic stimuli that produced increased muscle tension will, through their discharge through the autonomic nervous system, bring about altered metabolism in muscles and joints.

The personality of the patient has a great deal to do with the type of psychosomatic response he will show. Male patients will have different reasons for low back pain than female patients. Generally it has been found that the essential psychodynamic factor in the production of low back pain is the threatened failure of the ego defenses against passive dependence and submissivity. For this reason there is introduced an alternate defense, certainly more primitive—that of holding the spine rigid in vertical extension by both voluntary and involuntary spasm. Quite often the psychodynamics of increased muscle tension during convalescence from back injuries are related to predisposing psychologic factors.

Generally, it has been found that male patients with low back pain are individuals in whose personality there could be demonstrated inadequate or symptomatic ego defenses against unconscious passive submissive wishes. The psychosomatic symptom of increased muscle tension appeared when there was a threatened failure of these defenses.

In women the interference in the activities which carried the unconscious hostile aggressive impulses is often the important precipitating factor in low back pain of psychosomatic origin. The psychodynamics are found to be related to the interruption of masculine protest work adjustments.

In patients who develop increased muscle tension following back injuries, particularly the males, it is found that the disturbing emotional stimulus which stirs up the nuclear conflict is related to the psychologic conditions peculiar to the sequence of events which followed the injury. These involve the psychologic meaning of being injured, the locus of injury, reactions towards people with whom the patient comes in contact after being injured, loss of emotional gain which comes

from work, and responses to the existence of a protracted disability. In other words, the personality of these patients is particularly vulnerable to the series of circumstances which follow their accidental injury.

The concept that the increased muscle tension which leads to functional back rigidity is a physiologic response to the discharge of unconscious, hostile impulses, suggests the explanation that stiffness is a symbolic defense against bending or yielding.

Injury to the back seems to have special psychologic significance to these patients. This type of rigidity has not been observed with injuries to other parts of the body. However, it has frequently been observed that similar conversion muscle tonus increases when other anatomical units are involved in direct injury. It may be that the highly developed phylogenetic, physiologic, and anatomical pathways which associate body movement with ideation in our daily life, together with a general human tendency to think and feel in terms of symbols, prepare for a discharge of unconscious tendencies into motor conversion syndromes in the anatomical part when this part is involved in an injury.

Examination of psychogenic backache patients shows, in addition to findings related to the back, a high incidence of circumferential hypalgesia, vasomotor disturbances, hyperactive reflexes, hyperhidrosis, tremor of the extremities, sighing respirations, restlessness, disorders of the gait, and other signs of anxiety-tension or autonomic instability.

The following types of psychogenic low back pain have been established:

1. Pain due to muscle tension of conversion origin (repressed rage) leading to a) an extended rigid back, or b) a bent back, or c) lists, scoliosis, or bizarre postures.

2. Pain of conversion origin where there is no evidence of muscle tension or pain on movement and the back is the site of various sensations labeled pain (repressed emotions of various kinds).

3. Pain due to muscle tension of anxiety-tension origin (generalized bodily states of tension where the back muscles are incidentally involved.)

4. Pain of types 1, 2, or 3 concomitant with a trivial injury or disease involving the back, or appearing after such an injury or disease is healed.

DIAGNOSIS

Diagnosis of a psychogenic back disorder should be made only after thorough general and special examinations, including X-rays. Psychiatric investigation should endeavor to establish such factors as: heredity and pseudoheredity in the family history, childhood neurotic personality structure, or sensitivity to specific emotional factors, especially at crucial life periods.

In differential diagnosis, these factors favor the impression of a psychogenic back disorder: gross incongruities between the quality and severity of symptoms and structural changes; qualitative neurotic aspects of the presenting complaint; persistence or recurrence of disability despite rest, physiotherapy and medication; bizarre postures or limps; association of other neurotic manifestations.

Comparing organic and psychogenic back disorders: point tenderness is found in organic affections, diffuse tenderness in psychogenic ones; an organic rigid spine is accompanied by consistent muscle spasm, facet tenderness, X-ray and laboratory findings; in organic back pain the condition rarely remains the same for long periods, while in psychogenic back pain it frequently remains the same as in the beginning of the disorder.

TREATMENT

As for treatment, psychogenic backache should be treated by psychotherapeutic means. The treatment of a psychiatric condition should be psychiatrically oriented.

Injection of local anesthetics in muscles in reflex spasm and many cases of obscure low back pain gives relief. Dry needling alone has been found to be temporarily effective in low back pain of neurotic origin.

Physostigmine, neostigmine with atropine, tetraethyl-ammonium-chloride injections have been found of value. Active postural exercises and training, after combined orthopedic and psychiatric evaluation of the patient, is indicated in some cases. Passive physiotherapy, except as an adjunct to psychiatric treatment where the patient understands the purpose of the physical treatment, is to be avoided.

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Drug-Induced Extrapyramidal Reactions: Their Clinical Manifestations and Treatment with Akineton®

FRANK J. AYD., JR., M.D.

The prescription of a phenothiazine derivative, either as a tranquilizer or an anti-emetic, may precipitate, in susceptible individuals, a variety of disconcerting, occasionally alarming extrapyramidal reactions. These drug-induced neurologic responses have occurred most often in psychiatric patients who took the responsible agent for tranquilization and in non-psychiatric individuals, especially children and obstetrical patients, who received the drug as an anti-emetic. In the latter group various dyskinetic symptoms have been the predominant type of extra-pyramidal effect. Because of their abrupt onset, and their dramatic, bizarre neuromuscular manifestations they have been misdiagnosed as seizures, tetanus, meningitis, encephalitis, and poliomyelitis resulting in emergency hospitalization, spinal punctures, antibiotic therapy and even tracheotomies.[1]

Phenothiazine-precipitated extrapyramidal reactions are neurophysiologic, and not toxic effects of these drugs. They are contingent upon the individual susceptibility of the patient, the chemical structure and milligram potency of the phenothiazine derivative, and to a lesser extent upon its dosage. Since the tendency of the pharmaceutical industry has been to introduce phenothiazine derivatives that are more potent than their predecessors and which have a greater propensity to cause extrapyramidal reactions, prompt recognition and management of these symptoms is more urgent than ever.

On the basis of chemical structure, pheno-

Akineton® supplied by Knoll Pharmaceutical Company, Orange, New Jersey.

Chief of Psychiatry, Franklin Square Hospital, Baltimore, Maryland.

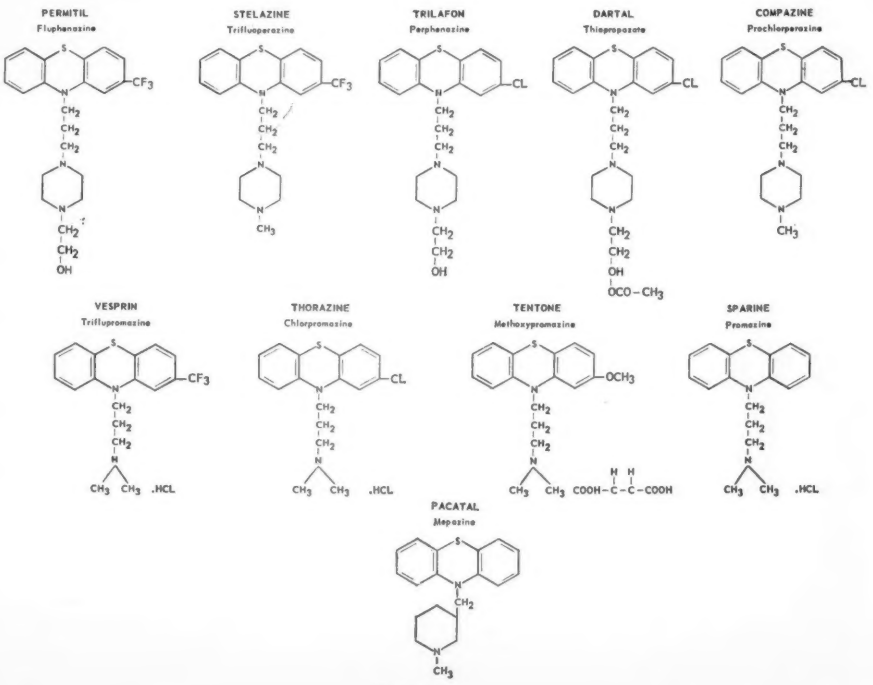

Figure 1.

thiazine derivatives can be divided into: (1) the piperazine group, characterized by a piperazine ring in the side chain and represented by Permitil (fluphenazine), Stelazine (trifluoperazine), Trilafon (perphenazine), Dartal (thiopropazate) and Compazine (prochlorperazine); (2) the chlorpromazine model group, characterized by a 3 carbon straight side chain and represented by Vesprin (triflupromazine), Thorazine (chlorpromazine), Tentone (methyoxypromazine) and Sparine (promazine); and (3) the piperidine group, characterized by a piperidine ring in the side chain and represented by Pacatal (mepazine). (Figure 1.)

The potency of these drugs has been assayed by the criteria proposed by Freyhan.[2] These were (1) the attainable level of psychomotor inhibition, (2) the speed of action, and (3) the dosage required to obtain effective action. By these standards Pacatal, Sparine and Tentone are half as potent as Thorazine which is less potent than Vesprin. Compazine is 3 to 5 times, Dartal 4 to 7 times, Trilafon 5 to 10 times, Stelazine 8 to 12 times and Permitil at least 10 to 20 times as potent as Thorazine. (Figure 2.)

Phenothiazine derivative-induced extrapyramidal manifestations occur with increasing frequency, appear earlier in time and with progressively smaller doses of the drug as one ascends the potency scale from the piperidine to the piperazine groups. (Figure 3.)

In a previously reported study Pacatal, Sparine, and Tentone caused extrapyramidal reactions in 1 to 2 per cent of patients when the daily dose exceeded 400 mg.[3] Thorazine was responsible for neurologic effects in 34.5 per cent of patients when the dose was more than 300 mg. a day. Vesprin, in daily doses of 150 mg. or more, induced these reactions in 36 per cent of patients. All the piperazine group compounds produced neurologic symptoms in 40 per cent or more of patients, except Trilafon which produced them in 36 per cent. (Table I.)

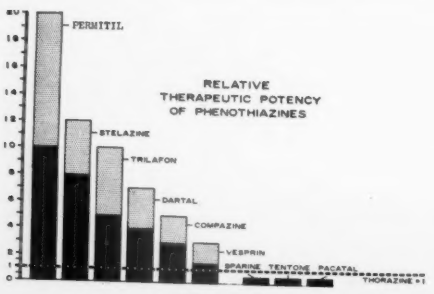

Figure 2.

The phenothiazines have caused the various manifestations of akinesia, dyskinesia, akathisia, and parkinsonism. Akinesia is characterized by weakness and muscular fatigue. It causes the patient to be almost constantly aware of fatigue in a limb used for ordinary, repetitive motor acts such as walking or writing. In advanced form the patient complains of aches and pains in the musculature of the affected limb. This may be associated with joint pains, most often in the shoulder, with limitation of motion. Patients with akinesia seem apathetic. They are disinclined to initiate or to expend the energy to complete a task. Hence, there is reduction in their voluntary activity.

Akinesia is the most common form of neurologic reaction to phenothiazine derivatives —but it is seldom recognized as such. Instead, because of the patient's apathy and inertia, it is often erroneously assumed that he is sedated by the drug, even though he is alert and complains not of drowsiness but of weakness and fatigue. Akinesia may be relieved by reducing the dose of the responsible drug or by the addition of Akineton 1 to 2 mg. twice daily.

Dystonic reactions or dyskinesia are characterized by abrupt onset of retrocollis, torticollis, facial grimacing and distortions, dysarthria, labored breathing and involuntary muscle movements. This may be accompanied by scoliosis, lordosis, opisthotonos, tortipelvis and the characteristic gait of dystonia. The majority (80 per cent) of these reactions occur in the first 72 hours of treatment. The larger the initial dose of the phenothiazine and the briefer the time between doses, the more likely are dyskinetic symptoms to occur. This is particularly true if the drug is administered intramuscularly or in suppository form.

Table I, which is based on 4,000 psychiatric patients, shows that dyskinesia has not been precipitated by the weaker phenothiazines, Pacatal, Tentone, and Sparine, and it is an infrequent side effect of Thorazine. The fluo-

rinated phenothiazine, Vesprin, has been responsible for this reaction as often as Compazine, Dartal, and Trilafon. It was not, however, until Compazine and Trilafon were advertised and used extensively as anti-emetics that reports of phenothiazine derivative-induced dystonic reactions began to appear in the literature. These publications were authored by pediatricians and obstetricians who administered the responsible drug in relatively large doses and at short intervals. This technique of therapy, because of the potency and prolonged action of these drugs, resulted in the patient receiving proportionately much larger doses than that prescribed for psychiatric patients and culminated in the appearance of severe dystonic reactions, the neuromuscular manifestations of which could easily be misconstrued to be due to acute encephalitis or tetanus.

Dystonic reactions can be relieved promptly by the intravenous or intramuscular injection of 1-2 mg. Akineton, which may be repeated in a half hour if necessary. Thereafter oral Akineton 1-2 mg. should be prescribed every 4 to 6 hours for three or four doses. Subsequent administration of the responsible drug should be deferred for the next 24 hours. Then the drug may be represcribed in lower doses or concomitantly with oral Akineton 1-2 mg. twice a day, since dystonic reactions are not a contraindication to further therapy.

TABLE I
Extrapyramidal Reactions

	Dosage at which extra-pyramidal symptoms may be observed	% of Cases Showing		
		Parkinsonism	Dyskinesia	Motor Restlessness
Permitil	3 mg.+	10	12	30
Stelazine	4 mg.+	22	8	30
Trilafon	32 mg.+	15	1	20
Dartal	40 mg.+	17	2	25
Compazine	60 mg.+	20	2	21
Vesprin	150 mg.+	16	3	17
Thorazine	300 mg.+	14	0.5	20
Sparine	400 mg.+	0.5	0	1.5
Tentone	400 mg.+	0	0	1
Pacatal	400 mg.+	0.5	0	0.5

Oculogyric crisis is another form of dyskinesia. The attack begins with a fixed stare for a few moments. The eyes are then rotated upwards and to the side and fixed in that position. The patient is barely able to move his eyes. At the same time the head is tilted backwards and laterally, the mouth is opened wide, the tongue is protruded and the patient's facial expression suggests pain. An attack may

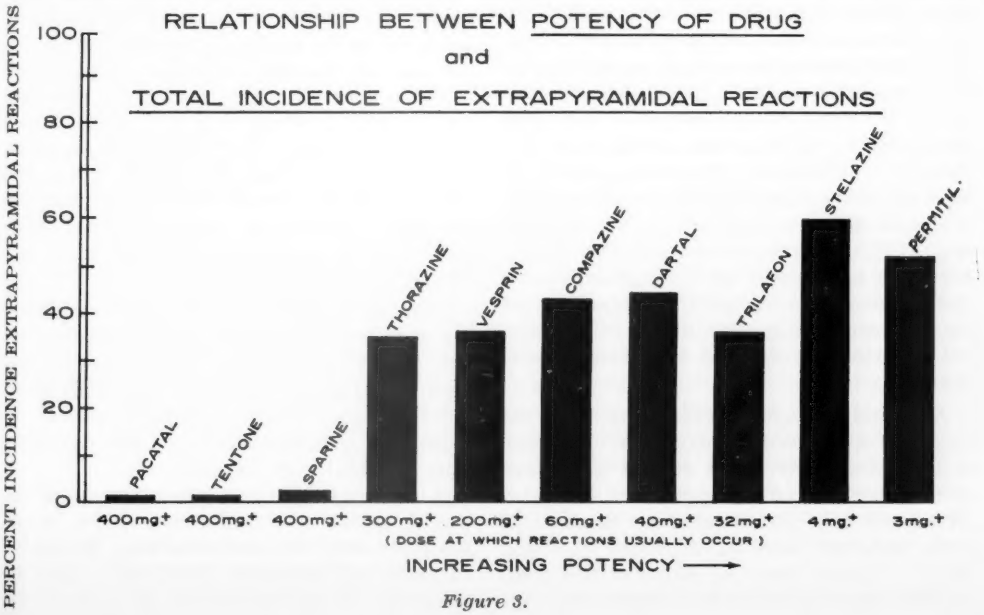

Figure 3.

last for a few minutes or several hours. Prompt relief is afforded by 2 mg. Akineton intramuscularly. Further oculogyric attacks can be prevented by either giving lower doses of the responsible drug or by the co-administration of oral Akineton 1-2 mg. once or twice daily.

Akathisia or motor restlessness is often described by the patient as the "jitters." He feels compelled to walk or pace the floor. When sitting he constantly shifts his legs or taps his feet and complains of feeling jittery or anxious. When standing the patient may continuously rock his body forward, backward and side to side or constantly shift his weight from one foot to the other. At the same time there may be chewing movements of the jaw, a rolling or smacking of the tongue, and a twisting of the fingers. Akathisia usually appears after the first week of treatment (earlier with the more potent drugs). The larger the dose, the more likely it is to occur. If the drug is continued, akathisia may be replaced by parkinsonism. Just as there has been an increase in dyskinesia with the advent of piperazine group phenothiazine derivatives, so too have these drugs increased the incidence of akathisia. Since patients with motor restlessness feel and appear anxious, physicians unfamiliar with this reaction may think the phenothiazine has not controlled the patient's anxiety and increase the dose. This invariably worsens the patient's condition. On the other hand akathisia may cause the doctor to discontinue treatment since the drug apparently increased anxiety rather than produced the anticipated tranquility. Although most patients are annoyed by motor restlessness and will not tolerate it long, neither course of action is necessary. The fastest relief can be achieved by 2 mg. Akineton intramuscularly. It also may be allayed by 1-2 mg. Akineton orally twice daily, often without lowering the dose of the phenothiazine drug.

Akathisia, especially when caused by the most potent phenothiazine drugs, Stelazine and Permitil, is the most difficult to manage of the drug-induced extrapyramidal reactions. Frequently only partial relief can be obtained with moderate doses of Akineton (4-8 mg. daily). Larger doses of Akineton are inadvisable since this drug exerts psychotropic effects of its own and its co-administration in large doses with a phenothiazine drug may precipitate a toxic psychosis. Safer control of severe akathisia can be secured by the simultaneous prescription of moderate doses of Akineton and small doses of a barbiturate.

The reduction of psychokinetic activity by phenothiazine drugs ranges from mild akathisia to extreme parkinsonian rigidity. In this study patients diagnosed as having parkinsonism manifested varying degrees of intensity and combinations of loss of associated movement, rigidity of limbs, cogwheel phenomenon, tremors, facial rigidity, poverty of movement, gait and posture disturbances, drooling and skin changes.

Like genuine paralysis agitans drug-induced parkinsonism develops gradually. More than one-half the patients complain of prodromal symptoms such as weakness, paresthesies and rheumatic and joint pains, especially in the limb which later became affected. Concomitantly, patients are less spontaneous, lack initiative, feel some awkwardness in the arms and legs and mention limb rigidity before it is objectively noticeable. Subsequent daily examination discloses the progressive development of the more characteristic symptoms of parkinsonism.

Muscular rigidity, impairment of normal associated movements and cogwheel phenomenon, were the initial signs of parkinsonism in 65 per cent of the cases. Tremor, which ultimately appeared in 60 per cent of the patients, was the first symptom in 35 per cent. In the beginning, tremor was confined to one limb or segment of a limb, usually the upper extremity. In more severe cases tremor affected the head, eyelids, lips, tongue and chin. Only rarely did the patient show a classical "pill-rolling" tremor.

Dysarthria, dysphagia, salivation and drooling were infrequent early signs of parkinsonism. They were caused most often by the more potent phenothiazines. Occasionally these bulbar symptoms were alarming, necessitating temporary discontinuation of the causative drug in addition to Akineton.

A catatonic-like state, similar to those reported by Berry[4] and May[5] developed in six schizophrenics who were receiving Thorazine (1 patient), Compazine (2 patients), Trilafon (2 patients), and Stelazine (1 patient). These

drug-induced cataleptic states could be distinguished from schizophrenic catatonia by the fact that these symptoms did not appear until the phenothiazine drug was administered, the negativism was proportionately less severe than the other catatonic signs, and in addition hypersalivation, skin changes and tremor were present. Each of these patients experienced a recurrence of pseudo-catatonia when later they were given other piperazine group phenothiazine derivatives.

Phenothiazine-caused parkinsonism usually appears after the 20th treatment day (earlier with the more potent compounds). By the 72nd treatment day, 90 per cent of the patients had parkinsonism and only rarely did a patient develop parkinsonism after the 100th treatment day, irrespective of the dose or the type of phenothiazine prescribed.

The duration of parkinsonism following withdrawal of the phenothiazine varies from 10 to 60 days; most patients (62 per cent) having no neurologic symptoms after 30 days. To date a proven case of persistent extrapyramidal symptoms after cessation of phenothiazine has not been reported. In this study two patients, both over 65, still have some extrapyramidal symptoms 25 and 30 months after the phenothiazine presumably responsible for their neurologic condition was stopped.

The eradication or control of these various parkinsonian manifestations can be obtained promptly by reducing the dose of the phenothiazine. It is almost always preferable, however, merely to add oral Akineton in doses of 1-2 mg. 2, 3 or 4 times daily, since this avoids the risk of loss of therapeutic benefit and permits uninterrupted phenothiazine therapy.

RELATION OF EXTRAPYRAMIDAL SYMPTOMS TO AGE OF PATIENTS

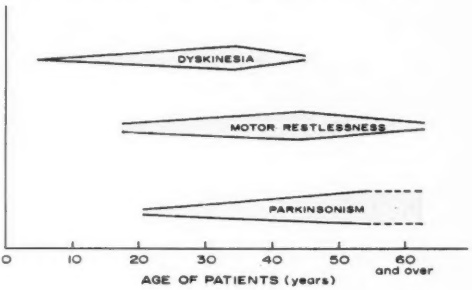

Figure 4.

The older the patient the more likely are extrapyramidal reactions to occur. This is true for every phenothiazine drug as illustrated by data compiled in Table II. Seventy per cent of all extrapyramidal effects for all age groups are in patients over 50 years of age.

Although these neurologic symptoms may appear at any age, dyskinesia usually happens in males between ages 5 and 45, akathisia or motor restlessness usually occurs in females between ages 12 and 65 and parkinsonism usually happens in females between ages 15 and 80. (Figure 4.)

Even when the sex ratio is approximately equal akathisia and parkinsonism appears three times as often in women, while dystonia occurs twice as often in men. (Figure 5.)

Extrapyramidal reactions due to phenothiazine drugs are a matter of individual susceptibility even more than a matter of chemical structure, potency, dosage, or duration of treatment. There are patients who never experience neurologic effects (non-neurologic reactors) although they take the same drug in equal or larger doses, for the same length of time or longer, as those who develop extrapyramidal symptoms (neurologic reactors). In addition, some patients have only a single neurologic manifestation while others have several.

Further evidence of individual susceptibility

TABLE II

Phenothiazine Tranquilizers
Extrapyramidal Reactions
Age Distribution

	Permitil	Stelazine	Trilafon	Dartal	Compazine	Vesprin	Thorazine
Number of Cases	70	120	180	180	198	98	234
Age Range	%	%	%	%	%	%	%
0-19	0.3	0.4	1.0	0.5	0.0	0.4	1.8
20-29	1.2	1.2	1.3	0.2	1.1	1.0	0.9
30-39	11.8	13.7	13.5	15.3	14.9	16.5	13.3
40-49	12.1	12.3	12.0	13.0	13.7	12.1	16.0
50-59	32.6	31.2	31.8	32.2	29.3	33.7	34.0
60-69	34.2	32.4	33.1	30.2	30.8	35.0	32.3
70-79	7.8	8.8	8.2	8.1	10.2	0.3	0.2
80-89	0.0	0.0	0.0	0.5	0.0	1.0	1.5
Total	100	100	100	100	100	100	100

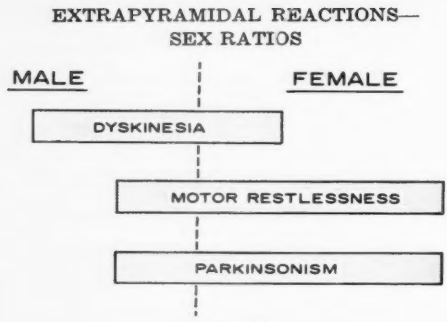

Figure 5.

comes from a study in which patients classified as neurologic and non-neurologic reactors were administered each phenothiazine derivative. This experiment indicated that an individual neurologically susceptible to one phenothiazine derivative was susceptible to all phenothiazine derivatives equipotent to or more potent than Thorazine, whereas those resistant to one were unresponsive to all phenothiazine derivatives.

That time and dosage are relatively unimportant compared to individual susceptibility is exemplified by patients on prolonged phenothiazine therapy. Some of them have taken more than 1000 mg. of Thorazine daily for four years without developing parkinsonism; others have taken 32 to 64 mg. of Trilafon a day for three years with equal immunity to extrapyramidal effects; and still others have taken relatively large doses of Stelazine and Permitil for six months to two years without neurologic effects.[6]

Clinical experience with over 25 phenothiazine derivatives has disclosed that in some instances blood-relatives have similar major side effects from these compounds. In this large group of neurologic reactors there are several siblings, parent-child and two cases of grandparent-parent-child who have had the same or different types of extrapyramidal reactions. The number of these blood-related individuals is too small to have any statistical significance that might indicate a hereditary predisposition to drug-induced neurologic responses. Cauffman and Pauley have reported a family in which a six year old girl, her mother and maternal grandfather had extrapyramidal tract symptoms while taking phenothiazine anti-emetic therapy.[7]

Prior to prescribing a phenothiazine it is wise to inquire if the patient or his blood relatives have taken any other phenothiazine, and their reaction to it, since phenothiazine-precipitated extrapyramidal reactions occur in susceptible individuals. If the patient had a neurologic response to a previous phenothiazine, his therapy with another one, equipotent to or more potent than Thorazine should begin in combination with Akineton to prevent or minimize extrapyramidal tract symptoms.

Akineton (biperiden) is 1-bicycloheptenyl-1-phenyl-3-pepiridinopropanol-1. It is a new synthetic anticholinergic and myospasmolytic agent for the treatment of parkinsonism. Experience in Europe suggested that this compound was therapeutically as effective as other antiparkinsonian agents while causing fewer and milder side effects.

In the past four years Akineton has been ministered for three days to two years to 500 patients (196 men and 304 women, ages 5 to 76) who had various types of extrapyramidal reactions from phenothiazine therapy. This group was composed of 315 patients with akathisia, 60 patients with dyskinesia and 125 patients with parkinsonism.

In severe dystonic reactions and in parkinsonism patients with bulbar symptoms, or whenever the patient could not swallow tablets, or when rapid relief of extrapyramidal symptoms was desired, Akineton was administered intramuscularly or intravenously. Since experience in 25 patients who were given the drug intravenously revealed no significant difference in onset of effect between intravenous and intramuscular injection, the intravenous administration was abandoned. The parenteral dose was 1-2 mg. which was repeated, when necessary every 4 to 6 hours for 1 to 2 days. The action of injected Akineton was rapid, improvement sometimes being apparent within 5-10 minutes with the maximum effect occurring within one-half hour. Hence if complete eradication of dyskinetic symptoms was not obtained in a half hour after the initial dose of 1-2 mg. parenteral Akineton, a second injection of the same dose was administered. This usually ameliorated all neuromuscular manifestations of dystonia for 90 per cent of the patients. The remaining 10 per cent of the patients were completely relieved with a

3rd or 4th intramuscular injection. As soon as the acute extrapyramidal symptoms were relieved, oral Akineton was substituted. Parenteral Akineton was administered 480 times to 165 patients. These injections were painless and did not cause any detectable local tissue irritation.

The starting oral dose of Akineton was 0.5 mg. or 1 mg. 4 times a day or 2 mg. twice daily. This was increased by increments of 0.5-1 mg. until the therapeutic level was reached. Most patients experienced control or elimination of extrapyramidal symptoms with doses ranging between 2-8 mg. daily. Doses in excess of 8 mg. daily were rarely needed and were associated with an increase in the severity of side effects.

Oral Akineton generally was effective in relieving akathisia in 1 to 2 days and parkinsonism within 2 to 3 days, while the responsible phenothiazine was continued without any change in dose. Thereafter the drug was prescribed for two weeks; then the dose was reduced gradually for two weeks. If extrapyramidal symptoms reappeared, the effective therapeutic dose was reinstituted for another month and then Akineton was gradually discontinued over a one month period. In this study 85 patients (17 per cent) took Akineton from 3 to 50 days; 50 patients (10 per cent) from 50 to 100 days; 300 patients (60 per cent) from 100 to 200 days; 40 patients (8 per cent) from 200 to 350 days and 25 patients (5 per cent) from 1 to 2 years.

Akineton was not responsible for a single dangerous or toxic effect in the 500 patients treated. The side effects it caused were of a minimal degree and of no greater frequency than those produced by other antiparkinsonian agents with which it was compared, often in the same patient. The most common side reactions were blurred vision and dryness of the mouth. These were seldom complained of spontaneously by the patient. Generally they subsided with continued administration of Akineton. Only occasionally was it necessary to lower the dosage of Akineton to eradicate these side effects. Decreased urinary flow was mentioned by 14 patients. This was alleviated promptly by dosage reduction.

One hundred patients in this study who took Akineton for three months or longer have had periodic liver function studies, leukocyte and differential counts and urinalyses because of their phenothiazine medication. The results of these laboratory investigations have been within the range of normal variation. Thus it appears that protracted Akineton therapy does not have a deleterious effect on the liver, bone marrow or kidney.

SUMMARY

This is a review of drug-induced extrapyramidal reactions resulting from phenothiazine compounds and their treatment with Akineton, a new antiparkinsonian agent. Its purpose is to demonstrate a correlation between the chemical structure and the milligram potency of a phenothiazine and its propensity to cause neurologic reactions. It describes the varieties of extrapyramidal syndromes encountered in 4000 phenothiazine-treated patients. The incidence, the time of onset, the sex ratio, and the age at which these neurologic reactions happen are analyzed. Data are presented to show that drug-induced extrapyramidal reactions occur in susceptible individuals and that they are not dependent on the dosage or duration of phenothiazine therapy.

Akineton was prescribed for 500 patients with drug-precipitated extrapyramidal reactions. The technique of therapy, the therapeutic results, side effects and safety of this compound are reviewed.

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Although psychiatry now emphasizes the psychological interpretations of mental disease, we doctors know that these psychological phenomena occur only as a result of physical processes and basic biochemical reactions in the nervous system. . . . We must attempt to correlate the findings of organic medicine with those of psychodynamics. . . . Not until psychiatry can correlate the physiological with the psychological will psychiatry and psychodynamics stand on a firm scientific foundation. . . .

There should be closer cooperation between pediatricians, internists, research scientists and psychiatrists in an effort to learn more of the nature of physio-psychic reactions.

Today there are some physicians certified as psychiatrists, trained principally in psychodynamics, with no interest in the all important physical basis of psychiatric medicine.

There is sufficient evidence today to justify the conclusions that psychodynamics describes but does not necessarily explain that psychotherapy is only one method of influencing the physiology of the nervous system. . . .

The organic and psychologic approaches to psychiatry are complementary. . . . We have complained that psychiatry continues to be incomprehensible to laymen as well as to many doctors. . . . For part of this we are responsible, inasmuch as we have sometimes made it seem a mystery by explaining it in terms of mythology rather than by means of scientific facts.

William B. Terhune, M.D.

Physiologic Psychiatry—Delivered at the Devereux Luncheon, during the 105th annual meeting of the American Psychiatric Association, Montreal, Can.

Psychosomatic Aspects of Geriatrics

(Physical, Social and Emotional Factors)

WILLIAM F. SHEELEY, M.D.

The physical woes of an aging person range from discomforts and vexations to life-threatening sickness and injury. Stairs become higher and longer; automobile traffic, faster and more threatening. Resiliency leaves the old man's step so that he can't catch himself when he stumbles and starts to fall. His vision dims, his hearing suffers and his false teeth clatter embarrassingly.

No longer can he console himself with: "Tomorrow, next month, next year, I will be better." For with each tomorrow, each month, each year he will be worse. No longer can he do unskilled labors relying heavily on physical strength. No longer can he compete with younger men for jobs that require split-second decisions, and instantaneous reactions.

His body chemistries get more readily out of order. He suffers malfunction of such physiological and chemical functions and states as acid-base balance, cerebral oxidation, blood urea level, blood calcium level. Possibly because old people neglect their diets, they are prone to abnormal body chemistry levels of which no one may be aware until they are discovered during routine examinations.

Somatic illness and injury and the Damoclean threat of illness and injury, plague the old man. At any moment a lump, or an awkwardness, or a pain may appear to herald his death. A trip across his bedroom may bring a fall, a broken hip, terminal delirium.

Some statistics show just how great a risk he runs daily: In the United States, somewhat more than 8 per cent of us are 65 years old or over. But 40 per cent of us who are incapacitated by illness for periods of three months or more are 65 or over. And older persons suffer 85 per cent of the accidental deaths due to falls occurring in homes.

Along with these physical risks, old age generates a variety of social problems. An old man has lost his independence. He had his independence because he was powerful, and he was powerful because he had the physical strength, the technical skill, or the social astuteness to impose himself upon the community. Loss of his strength, skill, and astuteness—or the unwillingness of the community to value them—cause loss of his ability to compete, to provide for self and family, and therefore, to be independent. Our community tends not to value what the old man has to offer. Subtle but constant pressures beset him to retire, to get out of the way, to find the elephants' grave yard. Employers do not hire older men "because of our retirement plan"; labor unions demand ever lower retirement age "so that these fine old employees can enjoy a well-deserved rest." Now plans are constantly being formulated, proposed and implemented to discard the aged person in ways that will ease the public conscience.

These discarding efforts have been effective; the oldster is a vanishing contender in the economic struggle. He makes less money. The median annual income of persons in the 65 and over group is only about half that of those less than 65. And only 30 per cent of the income these older people do have comes from employment. Old age insurance provides 40 per cent; public assistance 20 per cent; other resources such as family, the remaining 10 per cent.

He is retiring sooner than he used to. In 1941, about 20 per cent of both the 65+ and the 75+ men were retired. But by 1955 (possibly an effect of Old Age and Survivors' Insurance), 76 per cent of the 65+ and 97 per cent of the 75+ had retired.

One frequent concomitant of retirement, which perhaps has a more noxious effect on the old person than is generally realized, is the loss of the life ritual. By the life ritual I mean the compulsive routine to which every earner of a living must submit. He must be at a certain place at a certain time, and do certain things. Although he may rail at the rut he is in, that rut provides the warp and woof of his life; it provides his cardinal directions and gives his life meaning.

Retirement takes away this imposed ritual,

Presented at the Sixth Annual Meeting of the Academy of Psychosomatic Medicine, Cleveland, Ohio.

and if the old man cannot create a new routine that is meaningful to him he becomes that restless, lost soul so many of us consider the stereotype of the retired person.

The physical and social factors affect the emotions of the aged person greatly. He fears for his personal safety. He loses self-esteem and self-confidence as his social potency diminishes. He senses how little future he has left. He feels helpless and exposed. He sees death fast becoming an imminent reality.

The old person must adjust to these fears and feelings—or else! He must defend himself against their disintegrative effects, or suffer reduced capacity to function as an individual, and perhaps even complete dissolution as a human being.

This disintegration may depress him. Depression, which is perhaps the most common of the deleterious psychological concomitants of aging, usually develops insensibly. It may be discovered late or not at all by doctor, family or patient. The patient knows only that life has somehow lost its savor. Successes are empty; failures are overwhelming. Love of family palls. Each day starts out dully, although it may quicken a bit toward evening.

Nights grow longer; he awakens one to three hours before getting-up time and during those periods of lonely wakefulness problems which at 8:00 a.m. will be light and foolish, are massive and profound.

The future is absent, empty, or black. Food is tasteless and appetite poor; he may lose tens of pounds of weight over the weeks. Digestion becomes precarious; constipation frequent. Headaches—usually distributed over the occiput and often radiating downwards to include nape and shoulders—may grip him day and night for weeks.

Self-deprecatory ideas enter his thoughts. He may fancy he has sinned monstrously and unpardonably, although when he tells us of this great sin, we cannot understand the obvious torment from sin so petty. He may become restless, hyperactive, super-gay, soblessly tearful for little apparent reason. Others may become irascible, critical, fault-finding, secretive, smoldering, touchy, sensitive. Those around him may be suspected of the most threatening intentions. His depression or his paranoid disturbance, may itself not only prevent him from seeking help in his miseries, but even cause him vigorously to oppose the efforts of those who want to help him.

Often, the old person will feel that the present no longer belongs to him. He will seek gratification, then, in his own past and in himself. In memory, he relives happier times, and in reverie he seeks pleasures he no longer finds in reality. More and more he ignores the world about him.

And so the spiral begins: because he turns his attention from the world, it reacts less to him. Because it reacts less to him, he is less interested in it. Because he is less interested in it, he turns his attention from it still more, and so on.

He does not inter-act with his family, and they—perhaps a little grateful for this excuse to abandon him for affairs closer to themselves—inter-act less and less with him. Gradually, his inside world becomes more real to him than the outside; he loses his capacity to discriminate the one from the other. He loses track of time because it means so little to him. He couldn't care less what building he is in. Whoever is attending him, or conversing with him becomes whoever he wants that person to be. Then, we say, "This man is confused. He is disoriented for time, place, and person."

Now, in this paper I have treated the physical, social, and emotional factors of aging as if they were separate entities. It is apparent that this separation is an artifice employed to describe facets of what is, after all, an integral situation. The old man becomes depressed or paranoid because of the reciprocal action of these factors upon each other and upon him. He becomes disoriented partly because of the social and emotional factors, but also partly because of physical failings affecting nervous system, organs of special sense, and other bodily structures and functions. The ultimate characteristics of these factors depend not only upon their intrinsic nature, but also upon how each is modified by others. This state of things makes possible an almost infinite number of permutations. As a result the pattern of each old person and the problem he presents, is unique.

I am forced to use the most trite of clichés: You may use some general principles when you approach each old man and each old woman, but if you truly would help him solve his problems in the end you must understand that old person for himself alone.

Clinical Experiences with Amitriptyline (Elavil)

(A Preliminary Report)

WILFRED DORFMAN, M.D.

In this new era of psychopharmacology, new drugs constantly appear on the therapeutic scene. Their evaluation is often difficult, because of the paucity of objective criteria. A "definite" improvement in the eyes of one observer might be classified as a "failure" by another due to differences in goals in therapy.

Despite this tangible handicap, there is little question that the new psychotherapeutic drugs have made a substantial impact on present day psychiatric thinking and treatment. Many hospitalized patients have been discharged with marked improvement; the census of mental hospitals has decreased despite the high relapse rate and the increase in first admissions. Even in out-patients and in private practice, many have been sufficiently helped to warrant the sober opinion that drug therapy is useful and can often be synergistic rather than antagonistic with psychotherapy and electrotherapy.

It is the purpose of this paper to give a preliminary report on the clinical experiences encountered with a new antidepressant, amitriptyline (MK-230).

Amitriptyline was used for a period of four weeks or more in 40 patients hospitalized at the Brooklyn State Hospital and in 16 patients in private practice. In all, the target symptom was depression. In the hospitalized patients, all were chronically ill; they had either been hospitalized for many years, or else had concomitant medical problems. All had failed to react favorably to the "total push" efforts of the Acute Reception Service. The dosage was one tablet (25 mg.) t.i.d. This dosage was increased by one tablet daily until a dosage of two tablets t.i.d. was reached. At this point the dose was increased by one tablet every three days, if necessary, to reach a maximum of three tablets t.i.d. In many instances, this maximum dosage created excessive dryness of the mouth, so that two tablets t.i.d. frequently became the more acceptable level. All of these hospitalized patients had failed to react to either ECT or other antidepressant medications.

In the hospitalized patients, the various diagnostic categories and the effectiveness of amitriptyline were as follows:

	No. Patients	No. Improved	% Improved
Manic-Depressive, Depressed	4	3	75
Involutional Psychosis	19	13	68
Schizophrenia	8	6	75
Senile Psychosis	9	6	67

Manic-Depressive, Depressed:

The one failure occurred in a 64 year old female who was in her third mental hospital admission, the first occurring in 1944. She had failed to respond to ECT, Thorazine, Compazine, Tofranil, and Marplan. When she was first placed on amitriptyline she reported an improvement in four weeks on a dosage schedule of 75 mg. t.i.d. She stated quite emphatically that she was "better than she had been on any other drug." However, attempts to accelerate her discharge produced an increasing amount of agitation. Thorazine finally alleviated this agitation but she quickly reverted to her previous depressed state.

All of the three improved patients were chronically depressed and none of them improved sufficiently to warrant thoughts of discharge from the hospital. One had ten previous mental hospital admissions, with her current one occurring eight years ago. She was constantly agitated, in addition to being severely depressed. Prior to the administration of amitriptyline she had been smearing the walls with feces. She improved, by everyone's standards (especially those of the nurses and attendants), but will probably never meet the criteria for discharge from the hospital. One other had failed to react to Marplan, Nar-

Amitriptyline (MK-230) was furnished through the courtesy of Merck & Co., West Point, Pa., as Elavil.

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dil and Tofranil. The third failed to react to Nardil. All four patients in this group showed a high degree of anxiety in addition to their obvious psychomotor retardation.

Involutional Psychosis:

Two of the failures had similarly shown signs of improvement initially before they relapsed. One, a 69 year old female, seemed improved until the question of leaving the hospital was brought up. She was moderately anxious, in addition to being depressed. The other, a 57 year old female, had a history of previous mental hospitalization and had been a failure on ECT, Thorazine, group therapy, Nardil and Tofranil. A history of myocardial infarction in 1956, and persistent EKG evidence of severe coronary insufficiency, made drug therapy preferable to ECT. She showed no overt anxiety; her psychomotor retardation was most intense. Another failure, a 64 year old female, was diagnosed as involutional psychosis, mixed. Her first hospitalization occurred in 1933. She was a failure with ECT. While she had been on Tofranil there was a period of sustained well-being which lasted for a few weeks, but she had relapsed despite an adequate maintenance dose. Subsequent to this, Nardil was used without success. It should be noted that she had a high level of overt anxiety in addition to severe psychomotor retardation.

The three other failures in this group were all diagnosed as involutional psychosis, melancholia. In all three, psychomotor retardation was more prominent than overt anxiety.

The 13 patients in this category who had improved with amitriptyline all showed high levels of anxiety in addition to psychomotor retardation. In only three of them was retardation a prominent symptom.

Schizophrenia:

In the schizophrenics, one patient, a 48 year old female diagnosed as paranoid, had a history of post-partum depression at the age of 32. Her present hospitalization was 13 months in duration when her "depression" warranted the use of an antidepressant. After two weeks of the drug at a dosage of three tablets t.i.d. she stated she "felt terrific." Within two days she was actively hallucinating. The dosage of amitriptyline was reduced rapidly to one tablet t.i.d. and Thorazine was added. At a level of 150 mg. of Thorazine t.i.d. she responded within a week. Subsequently she improved rapidly and was discharged from the hospital.

One failure occurred in a catatonic, a 49 year old female admitted 11 years previously, who had failed to respond to many courses of ECT, and to all attempts to reach her through various drugs and psychotherapy. She showed no overt emotion, a persistent low level of anxiety, and a high level of psychomotor retardation. A second failure, diagnosed as mixed schizophrenia, was a 39 year old female with an eight year history of mental illness. She had failed to respond to all drugs and psychotherapy. She too showed no overt anxiety but showed marked psychomotor retardation. Both failures thus showed no anxiety. On the other hand, the improved patients in this diagnostic category all showed high levels of anxiety in addition to their psychomotor retardation.

Senile Psychosis:

In this group, best results were seen in those who were recently admitted, and where the illness was of short duration. In most instances, the dosage schedule was limited to two tablets t.i.d. One patient, a 69 year old female whose illness was of three months duration, responded to amitriptyline within two weeks. The failures were seen in those who had been ill for long periods of time, whose orientation was poor, and in whom memory defects and stigmata of organic brain damage persisted. In this group, as with the others, patients with high levels of anxiety in addition to their psychomotor retardation showed the best results.

Office Practice:

In office practice, 16 depressed patients were given amitriptyline. Concomitant electroshock therapy was used in seven cases. In each instance, fewer treatments than usual were needed to produce a satisfactory remission. Among the remaining nine patients, five responded to amitriptyline alone. All of these had high levels of concomitant anxiety. The four failures, each characterized by little to no anxiety and high levels of psychomotor retardation, quickly responded to Nardil, an amine-oxidase inhibitor.

Discussion

Evaluation of the effects of the newer psychopharmacologic drugs is difficult since objective criteria are indeed sparse. The selection of subjects adds to the difficulties, since all depressions are not the same. They not only vary in length, but in depth. Psychodynamic factors, the motivation to get well, the secondary gain of illness, all play considerable roles in the final results. Discharge from the hospital can hardly be considered the sole target, since many are discharged but return quickly. Others could be discharged, but have no place to go. Families differ in their motivation to re-accept the mental patient and are frequently influenced by the reality of insufficient space in an overcrowded apartment. These factors hardly reflect the extent of the patient's recovery. Nevertheless, they make for statistical failures if the goal is discharge from the hospital.

Amitriptyline proved to be an effective antidepressant in 28 of 40 hospitalized patients (70%). In office practice, 16 patients were treated with the drug. Seven of these received concomitant electroshock therapy; in the remaining nine there was a significant response to amitriptyline alone. All four failures responded to Nardil, an amine oxidase inhibitor. Those who responded to amitriptyline were all characterized by high levels of anxiety in addition to their psychomotor retardation, while the failures on amitriptyline showed little to no anxiety and a prominent psychomotor retardation.

The effectiveness of amitriptyline was therefore greatest in those depressions where there were concomitant high levels of anxiety. It was equally effective in managing the "depression" of the schizophrenic, but except for one startling instance had no effect on the course of the schizophrenia itself. In this latter instance recovery set in after amitriptyline had first changed her latent paranoid trend to an active hallucinatory one, and phenothiazine tranquilizers were used to quiet her down.

In view of the fact that Nardil, an amine oxidase inhibitor, proved efficacious where amitriptyline failed, it may be helpful to distinguish two types of depression: one with high levels of anxiety and the other with pure psychomotor retardation. The preliminary results reported here seem to indicate that where psychomotor retardation is accompanied by a high degree of overt anxiety, amitriptyline is indicated; where there is pure psychomotor retardation with no overt anxiety, the indication is for the use of an amine oxidase inhibitor (Nardil).

Conclusions

1. Amitriptyline proved to be of value in 28 of 40 hospitalized patients with severe depression (70%).

2. Best results were seen in those depressions accompanied by high levels of anxiety in addition to their psychomotor retardation.

3. Preliminary results, both in hospitalized patients as well as in patients seen in office practice, seem to indicate that amitriptyline is indicated in depressions with concomitant high levels of anxiety, while Nardil (amine oxidase inhibitor) seems to be indicated in "pure" psychomotor retardation.

4. Amitriptyline has, in general, a spectrum of action more closely related to that of imipramine than to the amine oxidase inhibitors. There are suggestions, however, that in some respects it differs from Tofranil, and these deserve further exploration.

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I find the real thing in this world is not so much where we stand, but in what direction we are moving.

O. W. Holmes.

A Note on Sweating in Mental Illness

MORTIMER OSTOW, M.D.

Several of the patients I have treated for melancholia-like depressions with iproniazid (Marsilid) or with beta-phenylisopropyl hydrazine (Catron) have noted excessive perspiration. This was usually maximal at the back of the neck and of the head, but often included the back of the chest, and occasionally the entire chest. The perspiration was more pronounced at night, or rather, when the patient was asleep. This observation has been made by others and this kind of perspiration is often listed in the literature accompanying hydrazine energizers, as a side-effect of the drug.

I became somewhat more interested in hydrazine induced sweating when I noted that one of the patients who was most severely affected by it, told me that he had been prone to night sweats for many years, often changing pajama tops once or twice during the night. He would also sweat during the day and generally had a clean shirt at the office so that he could change when he became too wet. Following recovery from his depression and cessation of medication, the perspiration subsided too, but it seemed to increase and decrease, *without resuming medication,* as his depression increased and decreased in the ensuing weeks and months. A patient who had been in a constant but moderate melancholia for about seven years told me that she had perspired profusely every night during all that time. Perspiration continued while she was taking Catron—until she suddenly broke out of her melancholia into a hypomanic state. At that point, *before she had stopped* taking the hydrazine, the nocturnal sweating came to an abrupt end and has not recurred. A third patient, a young married woman with hysteria, has complained of drenching night sweats on several occasions during the two years of her analysis. They would continue nightly for periods of a day or two to a week. On each occasion they accompanied a recurrence of depression.

Now it is clear that night sweats are not an invariable accompaniment of depression—yet there seems to be some relation between the two. Let us note first that the kind of depression which these patients have suffered has been of the melancholia type. I have, in a recent paper (1959) tried to establish a sharp distinction between the clinical manifestations of two kinds of depressive states, that associated with depletion of the libidinal energies of the ego, and that associated with no such depletion. Briefly, the former resembles a condition that has classically been called melancholia (Bleuler), and is characterized by mental and physical retardation, occasionally by agitation, often by anorexia, by aversion to people, by a single-minded concern with one's own feelings, and by inordinate guilt and self-degradation. The depression which is not associated with libido depletion shows none of these qualities: the patient displays his depression in his relations with those he loves; responsibility for disappointment is projected onto them; the patient is active and busy and hostile. In my opinion only the former type will respond to energizing drugs while patients suffering from the latter may become more depressed if they are given these hydrazine compounds. My theory (see Ostow and Kline, Ostow, 1960) is that these drugs achieve their effect by facilitating the replenishment of the ego's supply of libidinal energy.

How does this theory help us to understand the occurrence of night sweats? About drug induced perspiration, we can say that it occurs while the patient is under the influence of a substance which is facilitating a remobilization of ego energy content. We can also say of the patients whom I described, that when night sweats occurred spontaneously, they accompanied spontaneous efforts to counteract an ego-depletion depression. I think then, that it makes sense to infer that perspiration, especially nocturnal perspiration, localized in the head, neck and chest, may be associated with a tendency to counteract depletion of the ego. Such a statement, if it is true, obtains with respect to mental illness. But I wonder whether it may also obtain in the case of night sweats associated with debilitating (ego enervating) physical illnesses such as tuberculosis, or in the case of the profuse perspiration ac-

companying acute states of enervation such as surgical shock and hypoglycema.

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Psycho-Sexual Development – Orally Arrested Thumb-Suckers (and Teat-Totalers)

For many years psychiatrists have argued and attested
The typical thumb-sucker is a true case of arrested
Emotional development stopped at the oral stage,
Requiring some fulfillment to prevent panic or rage.

A child who gums nipples or thumbs must teeter on the brink
Of choice between a teat or thumb, unsated by his drink.
But when his tummy's full his thumb brings joy after he feeds,
Eschewing thus the anal stage to satisfy his needs.

These orally fixated kids, however, are in luck,
To have, so readily at hand, something to chew or suck,
But as they age these prototypes, prefer cigars (not butts) and pipes
To tranquilize despair or rage and soothe tantrums and gripes.

Had they progressed to be arrested at the anal phase,
Cigars and pipes and butts and thumbs would be all out of place.
Such things give way to molding clay in all anal fixations,
For then to use thumbs might produce instinctive deviations.

To choose his thumb seems rather dumb, in this way to be sated,
With nature's bounty full and founty unappreciated,
But tastes seem Gallic 'till the phallic stage arrives at last,—
Now he'd give tit for tat with pleasure, but his chance had passed.

If parents knew that children grew more normally, unhampered,
With psycho-sexual age and stage quite sagely left untampered,
And when distressed made a clean breast and openly expressed it,
They'd find teat-totalers to be not orally arrested.

Dr. Sam Silber
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The Treatment of Obesity

MYER MENDELSON, M.D.

Ideas about the treatment of obesity arise naturally from the concepts that are held at any given time about its causes. In the days when obesity was thought to be primarily an endocrine disorder, treatment was oriented in that direction. More recently the psychological aspects of obesity have been emphasized so that now many people think of treatment of obesity almost exclusively in psychological terms. We have a feeling that the pendulum has swung too far in this direction and we would like to pull it back a bit towards the center of the arc. We would like to do this for two reasons: First, despite all the interest in the psychological factors in obesity there is no convincing evidence that obesity is due entirely to psychological problems. And second and perhaps even more important, because of a study of 25 unselected obese males that we made in the past year. This work was done at the Hospital of the University of Pennsylvania under the direction of Dr. Albert J. Stunkard as part of an intensive study of male obese patients. We have been studying obese men because we were struck by the relatively small amount of information on this group in the literature. Most patients who have been studied have been women and it was in an attempt to correct this imbalance that we undertook this study. The subjects of the study consisted of the first 25 consecutive referrals of obese men from the Medical and the Psychiatric Out-Patient Department of the Hospital of the University of Pennsylvania. The major prerequisite for inclusion in the study was that the patient be at least 30 per cent overweight as determined by standard height and weight tables. The study of each patient included a detailed psychiatric history, intensive psychological tests as well as social work interviews with members of the family and physiological studies.

When you go to some efforts to get really unselected people, surprising things emerge. One observation that our study forced upon us was that there is no necessary or inevitable connection between obesity and personality disorder. We found obese patients who were highly neurotic and obese patients who were impressively stable. Our patients were scattered over the whole diagnostic spectrum from stable to schizophrenic; from the unemployed to the very productive; and from passive dependency to paranoid hostility. Additionally, we found that 20 per cent of our patient sample was free of diagnosable psychopathology. That is to say we considered 20 per cent of our sample to be essentially stable, the same proportion that is found in the general population. This emotional stability of a good proportion of obese patients is a factor that is generally overlooked even though other investigators have also found from 10 to 25 per cent of their patient samples to be reasonably stable. In many of those patients who were neurotic and disturbed we noted that their disturbances had little to do with their obesity.

What do we make of all this? Does this mean that psychological factors are of no importance in obesity and do not have to be taken into account in its treatment? This really doesn't seem a sound conclusion, if for no other reason, than that the main treatment for obesity, semi-starvation, is a remarkably difficult one to carry out and one in which most people fail. As nearly as we are able to tell, the doctor-patient relationship is the most important support for patients undergoing this effort of semi-starvation, and therefore is very important in the success of this kind of treatment. We think, therefore, that a consideration of the patient's emotional state is essential to make the doctor-patient relationship as sound as possible. Can the non-psychiatric physician do this? In a large number of cases he not only can, but actually is already doing just this. What then will be the role of the psychiatrist in the treatment of obesity? This is very difficult to say on *a priori* grounds. Right now it is our hunch that the best way to proceed in the treatment of obesity is for the non-psychiatrist—the general practitioner, the internist, the pediatri-

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cian—to make a therapeutic trial of treatment with his patient. We have found it unusually difficult to predict what these people will do in treatment. The most economical way to proceed is for the non-psychiatric physician simply to attempt treatment and see what happens. If he runs into difficulty then it certainly would help to have a psychiatrist available for consultation. A few things about the characteristics of obese people have impressed us which I feel are worth passing on here. These are no more than hints or suggestions which might have some value in telling how the treatment is going or where particular difficulties might arise.

First of all there are the indications that treatment may be successful. To list these in numerical order:

1) If the onset of obesity occurred after adolescence. (We aren't sure that such people are easier to reduce but we do feel that they are much less likely to get into difficulty in reducing regimens than if the obesity began before or during adolescence.)

2) If patients, even on casual contact, appear to be relatively stable and do not refer personal problems to their weight or body build.

3) If patients have carried out successful regimens in the past without undue difficulty.

4) If the patient's reasons for reducing are reasonable.

5) If the patient's goals of weight reduction are realistic.

6) Men seem to do better than women in reducing.

7) If the patients don't exhibit one of the following characteristics which we consider prognostically bad:

1) The presence of deviant eating patterns, in particular the night eating syndrome and binge eating. The night eating syndrome has been described by Stunkard et al.[1] and is characterized by nocturnal hyperphagia, insomnia, and morning anorexia. This eating pattern may persist through many years of a patient's life or perhaps even through his whole life. It exists in many patients who deny excessive eating at meals but who may not be aware of the significance of the excessive amounts that they take in during their night eating.

Physiological studies with gastric balloons have indicated that the patients who exhibit the night eating syndrome tend to deny hunger even when their stomach contractions are clearly demonstrated on the kymograph.[2] We feel that this insensitivity to gastric sensations may play an important role in many obese patients' seemingly inappropriate and senseless food intake. However, although there seems to be good clinical evidence that the night eating syndrome is a bad prognostic sign as far as weight reduction is concerned, it is only fair to say that we were not able to validate this in a survey type study of 100 patients.

Binge eating is a deviant eating pattern that frequently occurs in settings of extreme tension and that often follows surprisingly rigid patterns in any one individual.[3] Such patients have rather wide weight fluctuations and they are frequently able to lose large amounts of weight in their frantic ascetic bouts of weight reduction. However, these periods of weight reduction are inevitably followed by a regain of all the old weight and it is highly doubtful whether any advantage is gained by such efforts. When these patients are under situations of stress they may resort to extraordinary amounts of food sometimes in very peculiar fashion. One patient in our series would go from store to store in a stealthy fashion and buy up food indiscriminately feeling all the while, as he put it, "like a criminal." There are less extreme instances of binge eating when patients gain considerable amounts of weight due to excessive eating over comparatively short periods of time.

2) Another unfavorable prognostic sign as far as weight reduction is concerned is the presence of severe emotional disturbance in the course of attempts at weight reduction. Such emotional disturbances seem much more common in people who have manifested the night eating syndrome and certainly the past history of such difficulties should put the danger sign in front of any attempts at weight reduction. Stunkard[4] has commented on the frequency of depressions occurring during the period of dieting in many patients. Whenever there is a history of depression during dieting the treatment of obesity should only be undertaken with extreme caution.

3) We have found that patients whose obesity developed prior to their adolescence, particularly those in whom there is a disturbance

of body image, have a great deal of difficulty with weight reduction. Again it is difficult to say whether they do more poorly in terms of pounds lost in any one reducing regimen. However they do tend to regain their weight very rapidly, and mechanical attempts at weight reduction without considering the meaning of the person's obesity may be fruitless at best and dangerous at worst.

Regardless of what made them overeat when they were children, the fact that they grew up through childhood and adolescence with a body build that made them distinctively different from other young people their own age seems to impose very considerable additional psychological burdens. In our series most, but by no means all, of these so-called juvenile obese patients grew up with very disturbed concepts of themselves and of their bodies. They tended to be self-conscious and embarrassed about their appearance. In some instances their overweight made them feel and appear to others to be unmasculine. Severe problems related to sexual identification were noticed in seven of our eleven juvenile obese patients and in none of our adult obese.

4) We tend to be pessimistic about prognosis when it can be ascertained that the patient has very unrealistic expectations of the results of weight reduction, such as young women who feel that weight reduction will make them glamorous and even perhaps movie stars without their having to do anything concrete about their ambitions.

In summary, I have referred to the variety of psychological and psychiatric pictures that can occur in a series of obese patients. I have drawn attention to the fact that careful study reveals a certain percentage of obese patients, variously estimated to be between 10 and 25 per cent, to be essentially emotionally stable and free from neurosis of severe psychopathology. It seems entirely logical in treating these patients, and other obese patients whose neurotic difficulties are not necessarily related to their obesity, to employ orthodox medical techniques without psychiatric intervention. This does not mean that because they are not neurotic these patients do not require psychotherapy. But it does mean that they do not present such difficult barriers to treatment that the physician's psychological management of the case has to be supplemented by specialized psychiatric treatment. I have suggested that psychiatric consultation should be seriously considered for certain types of obese patients. Many of these patients can be readily identified by their deviant eating patterns, by the presence of emotional difficulties during dieting, or by the fact that their obesity is of long standing and has existed since childhood.

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Drugs and Organic Therapy in Depression

THEODORE R. ROBIE, M.D.

"Doc—you just start seeing opportunities all the time that just weren't there before, after this stuff begins to take effect on you."

(Comment of an eminent journalist after four weeks on Nardil.)

Since 1957 when a few investigators (Kline, Crane, Bosworth and others) called attention to the psychic energizing properties of iproniazid, a new and hopeful start has been made toward conquering depression. The successful remission of melancholia in many thousands of patients gives strong indication that recovery can be induced by chemotherapy alone, thus reducing the need for the more radical and costly electroshock therapy which previously has been the only successful treatment for suicidal depression.

Since the general plan of amine oxidase inhibitor therapy is now well known, I will concern myself here only with the application of chemotherapy. One of the major steps recently added is the use of the Wroblewski SGO-T transaminase test as a means of regulating dosage but chiefly to avoid extensive and possibly irreversible liver damage. Apparently any one of the energizers, even the least potent, may initiate toxic hepatic effects unless dosage is quickly lowered or the drug discontinued whenever the transaminase test is elevated. It is therefor essential that this test be used regularly as a means of detection of early hepatotoxic involvement. Not infrequently, an elevated SGO-T develops in the early weeks of treatment when dosage is higher than the later maintenance levels, yet no jaundice is visible. If dosage is not reduced immediately the transaminase will gradually go higher and jaundice may then appear; other liver function tests may then become positive. At this stage, perhaps only a week or two after the first warning elevated transaminase is discovered, it may be too late to restore normal liver function by interrupting intake of the drug. By the time jaundice actually appears, it may be impossible to reverse the process of incipient liver damage. If all doctors prescribing these less potent inhibitors are to protect their patients adequately they must, in my opinion, conduct a regular transaminase check-up on every case.

Although we have been assured by some that a particular analogue of iproniazid has no hepatotoxic effects, such an assertion is not justified at this stage in the development of therapy with these drugs. It is far better to recognize the possibility of toxic effects and learn how to cope with them, than to assume without reliable confirmatory evidence that such toxic effects do not occur and then awake one day to find that toxic hepatitis might have been prevented by a more conservative approach. It is incumbent upon those of us who use these drugs to use the knowledge available to insure against serious complications. Unquestionably, *it is possible* to anticipate the earliest beginnings of toxic hepatitis if we secure serial transaminase tests in all our patients undergoing antidepressant chemotherapy.

In thumbing through the files of patients seen during recent months, I found a surprising predominance of depressed manics, reactive depressions, involutional melancholias and, of course, the ever present schizophrenics. Our analytic colleagues would say the reactive depressions will all respond to analysis, but in my opinion some could be suicides unless they received adequate psychic energizer chemotherapy during their analysis. Others of our colleagues still declare that the *only* adequate therapy for all depressed manics and the involutional melancholias is electroconvulsive therapy. However, I am convinced that 80 per cent to 90 per cent of these cases receiving electroconvulsive therapy today, could two and one-half years ago have been treated successfully by energizer chemotherapy. This would have involved no loss of time from employment and in many instances this fact alone would have permitted the patient to keep his job.

What is most surprising today is that so few of our psychiatric colleagues have em-

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braced this new miracle-producing chemotherapy. When one of my patients moves to another community it is difficult to refer him (or her) to a psychiatrist who is chemotherapy-minded, despite the fact that a deluge of papers on Marsilid appeared in 1958 and many new ones are now appearing on the various iproniazid analogues. It is hard to believe that able psychiatrists continue to espouse electroshock for all cases when we possess an easier, safer and less expensive means of treating the multitude of melancholiacs among our rapidly growing population. Will most of the chemotherapy be administered by internists, obstetricians and surgeons or will the psychiatric fraternity awake to the astounding possibilities in chemistry?

Scientific curiosity is unpredictable. It is quite impossible to say in advance what truths will come out of research in any sphere. Psychiatrists are involved in a controversy over the question of which one of the chemotherapeutic agents recently described as efficacious for melancholia, is the most consistently reliable for inducing remission. This is a question of major concern since the persistence of suicidal trends cannot be toyed with. If the patient does not experience relief from his overwhelming melancholia within 3 to five weeks on chemotherapy he may despair completely and go ahead with suicide plans that have been simmering for considerable time when the "life is hopeless" theme has become increasingly dominant in the patient's thinking. Thus, it is extremely important that the psychiatrist inform his patient early that if the first chemical tried does not overcome the melancholia, there are others available, and that electroshock, the surest method, may be employed as a last resort.

Case 1. In one of my very melancholy patients, who was treated unsuccessfully with electroshock therapy and amine oxidase inhibitors, Tofranil apparently has proven successful as an adjunct to electroshock therapy and it may ultimately prove an adequate maintenance therapy. This woman who made a bonafide suicidal attempt by taking large overdoses of two medications, neither of which was as lethal as she suspected, was given five electroshock treatments in three days and then allowed to go on a trip with her husband, on his insistence. She was given 100 mg. of Tofranil daily during this travel interval.

Upon her return twelve days later there was very marked improvement in her behavior with almost complete elimination of the chronic melancholy status. She was given the planned EST and Tofranil was continued. On her return for the next EST the improvement persisted so we discontinued electrotherapy. It is our hope that this marked improvement will be maintained

How many persons might have lost their jobs in years past, had the boss learned that they were being treated for syphilis? Yet today, in the penicillin age, recovery from acute infection with this disease is so quick that the boss never hears about the patient's temporary infestation with the spirocheta pallidum. Since marked improvement may occur in a matter of weeks when depressed persons are administered amine oxidase inhibitors, and most cases fully recover in a month (even while continuing at work), the same would apply to these patients. It is well known that many persons lose their jobs when they have to take leave of absence to undergo electroshock therapy. This is not necessary when they are receiving chemotherapy and showing gradual improvement.

Considering adjunctive aids, I have found Dexedrine a valuable potentiator of any one of the amine oxidase inhibitors. This may prove a major bulwark in maintaining improvement, if the energizer dose has to be reduced because of temporary elevation of the SGO-T. Dosage may be 5 mg. two or three times daily, or the spansule may be given. It is also useful in any patient who is overweight or who begins to gain rapidly on energizer therapy. Whenever the patient is under weight I prescribe Ritalin in suitable dosage for the particular case, i.e., 20 mg. b.i.d. or 10 mg. t.i.d. Many patients have stated this adds a great deal to the improved spirits generated by the energizer. Furthermore, there are occasional patients who insist that the amine oxidase inhibitor causes a certain degree of drowsiness, especially during the beginning and in such cases Ritalin will counteract this torpor and induce alertness and greater efficiency during work. Since these patients realize how inefficient they were before treatment, this element is often an indicator of progressively developing improvement resulting from the combined energizer-Ritalin medication.

A considerable portion of involutional depressions do not react well to energizer medi-

cation. In many, the agitation is worsened and the chemical has to be discontinued. I have found that the new anti-tension agent, Permitil (White), helps tremendously in overcoming the excessive anxiety in depressions associated with anxiety neuroses and have used it frequently in conjunction with Marplan, Niamid or Nardil. Until now, a large proportion of these have required EST before satisfactory remission was induced. If this drug, which reduces fear, can allay agitation sufficiently to allow continued therapy during the three or four weeks necessary before the energizer's effect is recognized by the patient, then we may be able to report how some involutional patients have been saved from undergoing electroshock therapy.

Inevitably in the treatment of older people one encounters hypertensives. Because we found that Diuril was an excellent means of overcoming edema when this occasionally occurred in the earlier Marsilid-treated cases, we know that energizers and Diuril are perfectly compatible. Accordingly, whenever one encounters hypertension, there is considerable advantage in adding dihydro-diuril (the smaller tablet) in modest dosage, to the amine oxidase inhibitor regimen. One can adjust the dosage up or down as required and within a relatively short period bring the blood pressure down to a normotensive level.

Early in the chemotherapeutic era, I decided that there could be real advantage in using a non-barbiturate for the insomnia that frequently accompanies melancholia or which may develop during the early phase of Marsilid therapy. Noludar (Roche) served this purpose better than other non-barbiturates tried. Therefore, it is used routinely now. This removes the danger of suicidal attempts via barbiturates (Noludar is infinitely safer in overdosage) and has other advantages. Only in very rare instances when insomnia is severe do I permit barbiturate medication and then for only a few days, returning to Noludar as soon as possible. The amount of barbiturate capsules allowed the patient at any one time is small and under my control. One or two Noludar 200 mg. tablets are usually sufficient but more can be advised with safety. The patients gradually reduce their dosage themselves to one and then one-half tablet at night —as remission develops.

It has become evident, as each new chemical anti-depressant has emerged, that every psychiatrist will need an ever-increasing fund of knowledge of all these chemicals if he is to assure each melancholy patient the best chemical treatment available for his particular breakdown. Trial and error will still be our method for a long time to come until we have developed a method of differentiating the various types of depression. For example, amine oxidase inhibitors may fail where imipramine may be successful, or vice versa.

Case 2. In another severely depressed patient who, because of hypertension (182/102), was started on Roche 0700 in conjunction with Nardil, a very satisfactory remission of depression was induced in three weeks with substantial improvement evident in two weeks. However, when conservatism dictated discontinuing the 0700, the hypertensive B.P. level quickly returned (174/102) and it is, therefore, assumed that the 0700, which reduced B.P. to 124/76 will need to be reemployed. This element of coexistent hypertension undoubtedly plays a considerable part in the melancholia.

Case 3. An attractive single girl with an unwholesome home atmosphere became suicidally depressed when the forward behavior of a suitor (claiming marriage was his intent) necessitated her rejecting his attentions. The very intense despondency would have justified electroshock therapy. However, Nardil with added Marsilid for a short period (which stimulated weight gain), eliminated the repetitive suicide threats and revived her good standing in a job she nearly lost through absenteeism during the extreme despondency phase of her breakdown. Only time will determine whether she can be maintained through supportive psychotherapy and chemotherapy on her present level of satisfactory eudaemonia.

Case 4. One of the most hopeless cases I have encountered is a man, 57 years old, who has held several satisfactory jobs, but has lost them because of many depressive or manic attacks. He was brought to the office against his will, by his wife who felt he was at the end of his rope in a depressive recurrence. He informed me in his first interview that he had no security in his low-pay job, and only two weeks later informed me that his employment was being terminated in three days. It proved most fortunate that he had been started on Marplan three weeks earlier, for when he returned for his next visit, some days after his employment had been terminated, he was in much better spirits than at any time during the previous three and one-half weeks. It was evident that the energizer was accom-

plishing a remission of his depression. His dejection at the beginning of treatment was extreme, yet a month later with his vocational outlook apparently hopeless he was in good spirits and really optimistic about his future. This case proves (as have many others) that radical electroshock can be averted, in true manic depressives. He had received EST from me in a previous melancholy episode seven years ago, and the history confirms the fact that he had also been given EST in several different psychiatric hospitals for similar recurrences of depression.

Case 5. A twenty-two year old, 185 pound male was admitted to the hospital following a suicidal attempt via carbon monoxide. He had locked a garage door and left his motor running and was found in coma.

After recovering consciousness in the hospital he indicated that a girl friend had rejected him and he still had no desire to live.

Although there were excellent reasons for giving electroshock therapy, it was decided that chemotherapy would be tried. He showed considerable improvement and upon release from the hospital a week later, he was continued under treatment at the office, on 75 mg. of Niamid daily. He regressed slightly during the next week since his continued efforts to see his former sweetheart were thwarted. Accordingly, the dose was raised slightly and this proved sufficient to induce marked improvement in the next few days. At this stage he went out and found a new job which helped to induce further improvement.

Case 6. A man in his 40's who had been working excessively hard in a new position to which he was promoted, became overtired and ultimately severely depressed. He suddenly decided life was not worthwhile and left his home in the early morning in broad daylight. After driving his car a few blocks, he stopped, put a revolver to his head and pulled the trigger. The gun did not go off. Twice more he tried but the mechanism did not function.

He drove home and told his wife the truth. The family doctor was called, and I was called soon after. Intense depression was obvious and one might have decided that electroshock should be administered immediately.

Instead a transaminase test was taken, and he was immediately started on Marplan with supplementary Ritalin. He was still very sad two days later, with spoken words barely audible. Despite the history of liver disorder with jaundice (presumably hepatitis), a year previously, I tried 150 mg. of Marsilid. In two days he admitted he felt a definite lift, but when his transaminase registered 43 some four days later, Marsilid was reduced to 125 mg. daily. The transaminase was down to 20 within 15 days, though Marsilid dose was still 125 mg. daily with added Marplan 10 mg. Marked hypotensive effect developed (once an almost complete blackout) and B.P. was 98/78 compared with original 132/1 8. He had gained seven pounds. At this point both Marsilid and Marplan were stopped while cortisone was used to overcome the severe hypotension. In two days, with the B.P. 108/78, small doses (50 mg.) of Marsilid were reinstituted, later reduced to 25 mg. then 12 mg.

Full remission occurred after six weeks when he announced, "Gosh, I'm getting the old drive back, like I haven't had for two years." Soon thereafter he was shifted to Marplan, 5 mg. maintenance dosage and later it was reduced further. Because his own description points to a chronic depression of many years standing I have not felt justified in stopping the small dose of Marplan; he now takes 2.5 mg. daily. After the initial rise in transaminase, a number of normal reports followed. During the 11 months treatment there were two other slightly elevated tests but others were in the 20's. He is now beginning his second year firmly entrenched in his new job and with a very successful first year's record.

A worthwhile life has been saved, a job about to be lost has been converted into success, a patient has been saved from electroshock, and all his family have reason to be very happy over the outcome made possible by psychopharmacotherapy.

The energizers are now generally recognized as specifics for mental depression of any psychiatric category (endogenous, exogenous, etc.). But not often do we see severe psychasthenics giving up their compulsions or phobias without protest even though very prolonged psychotherapy has occurred. This next example, therefore, *has* significance.

Case 7. A 35-year-old mother of three children was referred for radical treatment of severe weight loss and intense melancholia. The referring doctor certainly expected I would give EST immediately because of her constant sobbing and the presumption that self-harm might be attempted. Severe phobic reaction had precluded her driving her car, and homicidal ideas toward members of her own family engulfed her whenever she saw any sharp object such as a knife or scissors. Chemotherapy was started with higher than usual dosage of Marplan. Close relatives were given emphatic instructions to keep close watch over her. Because of her many extreme phobias, she was given Permitil simultaneously since this reduces excessive fear al-

most immediately. Within three days there was considerable improvement. After nine days, she had gained four pounds and her improvement was apparent to everyone around her. They were amazed by her excessive application to housecleaning and other drudgery, though she continued to have obsessive thoughts of harming others when she encountered sharp objects during her housecleaning. Also, hyperanxiety was still induced when she read harrowing newspaper accounts of sensational deaths.

On the twentieth day after initiation of chemotherapy she came in with a springy step and bright cheerful expression, insisting that life was now a real joy and adding quite spontaneously: "Nothing bothers me now. I'm not even disturbed by knives or scissors anymore." This is a striking remission of obsessive-compulsive ideation not previously observed in any similar case. If this type of improvement can be duplicated in other psychasthenics we shall have a therapy for patients heretofore considered resistant to all psychiatric therapy, even psychoanalytic! Her Marplan dosage has already been reduced and her transaminase tests have been within the normal range—a most satisfying clinical result from every standpoint.

One of the most important phases in the chemotherapy of depression comes when we have been able to lower the initial dose of 3 to 4 tablets daily, after two to four weeks on intensive therapy. Gradually we lower to two tablets a day, then to 1 or 1½ and ultimately down to ½ or even less daily. Because of the cumulative element in this chemical, many patients can be maintained on a plateau of well-being on 5 mg. or less of Marplan or 10 to 5 mg. of Nardil, or 10 or 5 mg. of Niamid. Even then we must still recheck the transaminase every few weeks.

Since the dosage is so much a matter of individualization, we will find patients who will develop a slight SGO-T elevation on a dose of 1½ tablets while rare cases may do so on as little as ½ tablet per day.

Recording of weight, blood pressure and reflexes has become routine in every case. Patients do not gain weight to the same extent when taking the less potent energizers. The hypotensive effect is the first indication for dosage reduction and hyperactive reflexes have a similar indicative value. The standing blood pressure may be much lower than the sitting pressure explaining the patient's dizziness on standing up. Cortisone orally has great value in overcoming hypotension, particularly when combined with reduced dosage of the energizer. ACTH may be necessary when hypotension is severe.

Case 8. A 45-year-old housewife, who had undergone two courses of electroshock for severe depression, came for chemotherapy in the hope that it could accomplish what EST failed to do. She was started on one of the less potent A.O.I. analogues but a month later she was still depressed and insisting, "I have no strength to do my housework and I'm so depressed I'd rather die." A week later, although the dosage was not high, her transaminase jumped to 150 units, though no jaundice was evident. Of course, her medication had to be stopped and after the accumulation effect began to wear off, she began to slip rapidly back into the more severe retarded depression first seen. Although I resumed smaller doses of the chemical as soon as her transaminase test receded, it was, nevertheless, not enough to meet her greater than average need for the energizer, so she continued slipping, until she was again insisting to her everpatient husband that suicide was her only answer. Thus, in order to keep her under constant surveillance, he was obliged to take her with him on his daily automobile trips as a salesman.

Within nine days her transaminase dropped from 150 to 48 and a week later was down to 32, even though the medication had been resumed in reduced dosage. Although slight improvement was seen, it was not adequate and soon her suicidal thoughts recurred. She was then placed on Tofranil, the antidepressant that is believed not to act as an amine oxidase inhibitor. This raised her spirits remarkably within four days but then a generalized allergic rash appeared. Tofranil was discontinued and antihistamines administered. However, within another week the rash had cleared and small doses of Tofranil resumed. This time there was no return of the rash on only 100 mg. of Tofranil daily.

This case and a number of others in this study prove one significant generalization. No single chemical will succeed in every case but changing to some other one may bring a striking remission. This adds further confirmatory evidence to the assertion that chemotherapy can eliminate the great bulk of electroshock formerly given, provide marked relief to thousands of melancholy patients with great reduction in the cost of their illness, as well as eliminate possible skeletal fractures.

CONCLUSIONS

1. We now have available three apparently safe amine oxidase inhibitors for use in anti-

depressant chemotherapy, Niamid, Nardil and Marplan, which are approximately equal in therapeutic effectiveness.

2. These three will probably replace in great measure the original iproniazid and its potent follower Catron, until means of decreasing or eliminating the possible side effects seen with either of these are found. These are, however, more consistently powerful antidepressants.

3. Serial transaminase (SGO-T) determinations should become routine procedure whenever any antidepressant chemical is prescribed in order that toxic hepatitis may be recognized at the earliest possible moment and dosage revised accordingly.

4. Recording the patient's weight, blood pressure and reflexes should be routine with each office visit, since any of these may give valuable indications for the transaminase test. Standing blood pressure should be secured if pressure is below 100.

5. Psychotherapy, essential in every case, should be fitted to the nature of the problem and the intelligence level of the patient.

ADDENDUM

During the interval between the presentation of this paper and its publication, an advantageous method of utilizing amine oxidase inhibitor therapy has been instituted: In every instance, if a patient does not show a good response to the medication administered (Niamid, Nardil, Marplan), it has become my policy to add a moderate dosage of Marsilid in conjunction with Pyridoxine. Accordingly, many patients are now given 50 to 75 mg. of Marsilid with 25 to 37 mg. of Pyridoxine, during the second and possibly the third weeks of antidepressant chemotherapy. This usually results in definite improvement before the end of the second full week of treatment, but surely within three weeks after the initiation of therapy.

As soon as substantial improvement occurs, the Marsilid dosage should be reduced by one-half, while other amine oxidase inhibitor medication is maintained at the same level. Meanwhile blood pressures must be watched carefully, and if any hypotension occurs, Marsilid is either stopped or reduced, and Cortisone or ACTH, or both, instituted. Transaminase tests are performed frequently.

An additional advantage in the treatment of agitated patients (involutional cases, etc.) has been developed through the use of Librium or Permitil in conjunction with any one of the amine oxidase inhibitors. This has been shown in an exhibit at the 1960 American Psychiatric Association Meeting, the Society for Biological Psychiatry Meeting, and will be shown at the coming meeting of the Academy of Psychosomatic Medicine (paper in press).

676 Park Avenue, East Orange, New Jersey.

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ERRATUM

In the last issue of *Psychosomatics* (Vol. I, No. 2, Mar.-Apr. 1960, pg. 80) in the article entitled "Clinical Experiences With Phenelzine (Nardil) as an Antidepressant" there was an omission which requires correction.

The copy should read:

After one month of phenelzine she became jaundiced . . . A careful check revealed that 6 patients from her ward had become jaundiced during the past year. Since this was a diabetic ward, the possibility of Serum Hepatitis was considered. When the nurse became jaundiced it was conceded that she might have accidentally pricked her finger with a contaminated needle. When one of the attendants, who gave no injections, became jaundiced, the probability of Infectious Hepatitis became more logical. . .

The Editor is indeed sorry for this omission and hopes the author will forgive him.

Notes and Comments

The 1960 Academy Meeting

As the months pass, the October 13th to 15th meeting in Philadelphia draws closer. Plans for the program are slowly but surely becoming confirmed and now read as follows: Bright and early (8:30) Thursday things get under way with a symposium entitled "Emotional Problems in Medical Practice." Dr. Keith Fischer of Philadelphia, Psychiatrist-in-charge of the Psychosomatic Clinic at Temple University Medical School will moderate. Participants include Dr. David Grob, Professor of Medicine, State University of New York Downstate Medical Center and Director of Medicine at Maimonides Hospital of Brooklyn; Dr. Charles Herbert, Chief of Medical Service, Kaiser Foundation Hospitals, San Francisco; Dr. Raymond W. Waggoner, Professor and Chairman, Department of Psychiatry, University of Michigan Medical School; and Dr. Henry Brosin, Professor and Chairman, Department of Psychiatry, University of Pittsburgh Medical School.

After a coffee break and chance to visit the exhibits, a late morning panel will consider the "Emotional Aspects of Dermatology and Allergy." Panelists will include Dr. Maury Sanger, Assistant Professor at the Albert Einstein Medical School in New York, acting as moderator; Dr. Samuel Greenberg, Brooklyn dermatologist and psychiatrist; Dr. M. Murray Peshkin, Professor of Allergy, Albert Einstein Medical School; and Dr. Harold A. Abramson, Research Psychiatrist, Biological Laboratory, Cold Spring Harbor, New York.

At the same time, the first of a series of discussion groups will be meeting. These are described in greater detail at the end of this section, but should be noted as meeting each morning from 10:30 to 12:00 noon.

Luncheon panels scheduled for Thursday include 1) "Interview Techniques" with Dr. Henry Brosin, moderator; Dr. William Steiger, an internist at the Psychosomatic Clinic of Temple University; and Dr. Keith Fischer. 2) "Drugs and Research" with Dr. Herman Denber, Chief of Research, Manhattan State Hospital, as moderator; Dr. Frank Ayd, Chief of Psychiatry, Franklin Square Hospital; and Dr. Karl Beyer of West Point, Pa. 3) "Sterility and Frigidity" will be moderated by Dr. Robert N. Rutherford, Associate Professor of Obstetrics and Gynecology at the University of Washington Medical School at Seattle and Executive Editor of the *Western Journal of Surgery, Obstetrics and Gynecology.* Participants will be Dr. Herbert Kupperman, Associate Professor of Therapeutics at the New York University Medical School; Dr. Kenneth Teich of Duluth, Minnesota; and Dr. Victor Szyrynski, Professor of Psychotherapy at the University of Ottawa.

On Thursday afternoon from 2:30 to 5:00 P.M. there will be a symposium on "Psychopharmacology." The moderator will be Dr. Theodore Rothman, Associate Professor of Psychiatry, University of Southern California, Los Angeles. Probable participants will include Dr. Adrian Ostfeld, Dr. Fritz Freyhan, Dr. Theodore R. Robie, and Dr. William Furst.

The Thursday night round table will consider the problems of "Psychosomatic Medicine—Definitions, Goals, Limitations, Assorted Conflicts and Dilemmas." It will be moderated by Dr. Wilfred Dorfman of the Department of Psychiatry, State Univ. Medical Center, and Chief of the Psychosomatic Clinic at Maimonides Hospital, Brooklyn. Panelists include Dr. Paul Kielholz, Deputy Director of the Univ. Psychiatric Clinic, Basle, Switzerland; Dr. Maury Sanger, Vice-President of the Academy; Dr. Joseph Hughes, Professor of Psychiatry, Women's Medical College of Pennsylvania; Dr. Kenneth Appel, Professor and Chairman, Department of Psychiatry, University of Pennsylvania Medical School; Dr. William F. Sheeley, Chairman of the G. P. Education Project of the American Psychiatric Association. Other possible participants include Dr. Maurice Linden, and Dr. Leon Saul.

The Friday sessions get under way with two morning panels (starting at 8:30 A.M.). One will consider the topic "Chest Pain—Somatic and Psychic Factors." Moderator will be Dr. Burton Zohman,, Professor of Medicine, State University of New York, Downstate Medical Center. Participating will be Dr. Nathaniel Reich, also of the State University Medical Center; Dr. Robert S. Garber, Psychiatrist and Medical Director of the Carrier Clinic in Belle Mead, New Jersey. A second panel will consider "Handling the Patient with Chronic Illness." It will have Dr. David Grob as moderator and participants will be Dr. Edward Bortz,, Director of Medicine, Lankenau Hospital, Philadelphia; Dr. John Whittier, Creedmoor State Hospital, New York; and Dr. Ethan Allan Brown, Director, Asthma Research Foundation, Boston.

At 10:30 A.M. a panel will consider some of the "Emotional Problems in Surgery and Surgical Specialties." Dr. Arthur Foxe of New York, a psychoanalyst, will be moderator. Participants will include Dr. Louis J. Feit, Plastic Surgeon; Dr. Bertram B. Moss, Secretary of the Academy; and Dr. Clifford H. Keene, Director of Medical Relations, Kaiser Industries, Oakland, California.

Luncheon panels on Friday will include: 1) "Group Therapy," with Dr. Samuel B. Hadden, Philadelphia, as moderator and Dr. Albert Deutsch, Adjunct Neuropsychiatrist, Jewish Hospital of Brooklyn, and Dr. Victor J. Locicero, Philadelphia, participating. 2) "The Doctor as a Therapeutic Agent," with Dr. Robert S. Garber, moderator, Dr. George Train, Department of Psychiatry, State University of New York, Downstate Medical Center; and Dr. Charles Herbert participating; 3) "Short Term Therapy," with Dr. George Sutherland, Associate Professor of Psychiatry, University of Maryland Medical School, Moderator; Dr. Joseph Hughes, and Dr. James L. McCartney, Garden City, New York.

The afternoon session on Friday will begin with short addresses by Dr. Wilfred Dorfman, the President of the Academy, and Dr. George Sutherland, the President-elect. Following these, there will be a symposium entitled "Drug Therapy and Psychotherapy—Are They Compatible?" from 2:30 to 5:00 P.M. Dr. Wilfred Dorfman will moderate and participants will include Dr. Paul Kielholz; Dr. Kenneth Appel; Dr. Douglas Goldman, Clinical Director, Longview State Hospital, Cincinnati; and Dr. Mortimer Ostow.

The Saturday sessions will open with a symposium on "Psychiatric Education for the Non-Psychiatrist." It will be moderated by Dr. Jules Massermann of Chicago, Professor and Chairman, Department of Nervous and Mental Diseases, Northwestern University Medical School. Other participants in the morning session will include Dr. Milton Kurian, Chief of In-patient Psychiatry, Maimonides Hospital of Brooklyn who will speak on "Psychiatry in the General Hospital"; and Dr. Matthew Brody of Brooklyn, Chairman of the Subcommittee on Mental Health, who will address the Academy on "Experiences in Post-graduate Education of the Non-Psychiatrist." Dr. Klaus Berblinger and Dr. Victor Szyrynski will also appear on this morning panel.

The late morning panel on Saturday will be on the subject of "Hypnosis" and will have Dr. William S. Kroger, Associate Professor of Obstetrics and Gynecology, Chicago Medical School as moderator, and Dr. Leo Wollman of Brooklyn and Dr. Milton V. Kline, Lecturer in Medical Hypnosis, Post-Graduate Department, Seton Hall College of Medicine, as participants.

There will be two luncheon panels on Saturday. The first will feature an address by Dr. Jules Massermann on "Psychosomatic Medicine —A Triple Tautology." A second luncheon will cover the "Organic Aspects of Psychiatry." Participants include Dr. Karl Rickels, Dr. John Whittier and Dr. Zale Yanof.

At 2 P.M. there will be a plenary session, moderated by Dr. Matthew Brody. Reports of the material covered in these discussion groups will be considered here.

From 3 to 5 P.M. a movie session is scheduled. The three films to be shown include a) Geigy's "The Faces of Depression," Merck's "Extrapyramidal Reactions to Phenothiazine Drugs," and SKF's movie on the "Mechanism of Action of the New Drugs."

This program is acceptable for 18 hours Category 11 credit by the Academy of General Practice.

Discussion Groups

One of the features of the 1960 meeting will be the inauguration of a new concept in post-graduate teaching. The first two hundred registrants will be divided into groups of ten, and each group will meet for 90 minutes, from 10:30 to 12:00 noon each day, with one of the following moderators: Academy members Dr. Lionel Blackman, Dr. Abraham Beacher, Dr. M. Murray Peshkin, Dr. Theodore Rothman, Dr. Arthur Foxe, Dr. Robert Rutherford, Dr. Victor Szyrynski, Dr. Harry Phillips, Dr. Rudolf Dreikurs, Dr. Morris Riemer, Dr. William Kroger, Dr. George Sutherland, Dr. Bertram Moss, Dr. Harry Perlowitz. Others, who are non-members, include Dr. Abbott Lippman, Dr. Harry Sterling, Dr. Joseph Zimmerman, Dr. William Rubin, Dr. Milton Kurian, Dr. Harold Klein, Dr. Morton Hand, Dr. Sidney Green, Dr. Martin Symonds, Dr. Raymond Nadel, Dr. Edward Kent, Dr. Edward Pinney, Dr. Harold Berson, Dr. Bernard Schulman, Dr. Irving Crain, and Dr. Murray Lieberman.

A coupon for registration can be found on the last page of the journal. Send it in to Dr. Maury Sanger, 1601 Ditmas Ave., Brooklyn 26, N. Y.

Reservations

Hotel reservations for the 1960 meeting may be made by writing directly to the Benjamin Franklin Hotel in Philadelphia. Advance registration will guarantee rooms at the headquarters hotel where all sessions will take place, October 13 to 15, 1960.

Psychosomatics Editorial Board

The editorial board of *Psychosomatics* represents a broad spectrum of medical experience and training. In this, and the next few issues of the journal we will sketch in brief the backgrounds and affiliations of the Editor-in-Chief and the Associate Editors responsible for the publication of *Psychosomatics*.

*

Dr. Wilfred Dorfman, Editor-in-Chief, is a Diplomate in Internal Medicine as well as a qualified psychiatrist. A Fellow of the American College of Physicians and of the American Medi-

cal Writers' Association, Dr. Dorfman is currently President of the Academy of Psychosomatic Medicine. He is a member of the Executive Council of the Eastern Psychiatric Research Association, a member of the American Psychiatric Association and of the American Psychosomatic Society. Formerly an Internist, more recently Senior Psychiatrist at Brooklyn State Hospital, he is now Chief of the Psychosomatic Clinic and Assistant Chief of the Mental Hygiene Clinic at Maimonides Hospital of Brooklyn and Clinical Instructor in Psychiatry at the State University Medical Center. He is the author of *Overweight Is Curable* (Macmillan, 1948), has contributed many articles to the psychosomatic literature and has received awards both in nonmedical and medical writing from the American Physicians' Literary Guild, the American Medical Writers' Association and the Mississippi Valley Medical Society.

*

Dr. Frederick W. Goodrich, Jr., of New London, Connecticut, is the senior attending Obstetrician-Gynecologist at Lawrence and Memorial Hospital, New London. A frequent contributor to the medical literature, Dr. Goodrich is the author of *Natural Childbirth* (Prentice-Hall, 1950) and *Maternity* (Prentice-Hall, 1959).

*

Dr. Rudolf Dreikurs of Chicago, Illinois, is Professor of Psychiatry at the Chicago Medical School and the Director of the Alfred Adler Institute of Chicago. In addition Dr. Dreikurs is a Visiting Professor of Education at the University of Oregon.

*

Dr. Bernard B. Raginsky of Montreal, Canada, is a past president of the Academy of Psychosomatic Medicine. He is at present President of the International Society for Clinical and Experimental Hypnosis, and North American President, Section on Clinical Hypnosis, Pan American Medical Association. He is an Associate Physician at the Montreal Jewish General Hospital.

*

Dr. Theodore Rothman of Beverly Hills, California, is a Fellow of the American Psychiatric Association, the American College of Physicians, and of the American Association for the Advancement of Science. He is an Attending Physician, Psychiatric Service, Los Angeles County General Hospital, and Attending Physician in Psychiatry, Neuropsychiatric Hospital, Veterans Administration Center, Los Angeles, California. In addition, Dr. Rothman is Associate Professor of Psychiatry, School of Medicine, University of Southern California, Los Angeles, California.

*

Dr. Burton L. Zohman is a Diplomate of the American Board of Internal Medicine (C.V.), as well as a Fellow of the American College of Physicians, the American College of Chest Physicians, The American College of Cardiology, the American College of Angiology, the American Geriatric Society, and the American Federation of Clinical Research. He is Clinical Professor of Medicine at the State University College of Medicine, Brooklyn; Consultant Cardiologist, U.S. Public Health Service and Brooklyn State Hospitals, Attending Physician, Maimonides and Kings County Hospitals; and Chief of the Cardiac Clinic, Kings County Hospital, University Division. Dr. Zohman is the author of 60 publications, the greater number of which are in the field of cardiovascular research.

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Dr. Arthur N. Foxe, after a brief career in medicine and neurology has engaged primarily in the private practice of psychiatry for the past twenty-five years. He has been a prolific contributor to the psychiatric journals and has been connected, in an editorial capacity with: *Journal of Nervous and Mental Disease, Psychoanalytic Review, Journal of Clinical Psychopathology, Journal of Criminal Psychopathology, Alcoholic Hygiene, Archives of Criminal Psychodynamics,* and now, *Psychosomatics.*

Nominations for 1960-1961

The Nominating Committee has selected the following names for the 1960-1961 slate.

President: Dr. George F. Sutherland, Baltimore, Md. (Elected 1959); *President Elect:* Dr. Maury D. Sanger, Brooklyn, N. Y.; *Vice-President:* Dr. Robert N. Rutherford, Seattle, Wash.; *Secretary:* Dr. Bertram B. Moss, Chicago, Ill.; *Treasurer:* Dr. M. Murray Peshkin, New York, N. Y.; *Historian:* Dr. Burton L. Zohman, Brooklyn, N. Y.

For *Executive Council:* Dr. James L. McCartney, Garden City, N. Y.; Dr. Victor Szyrynski, Ottawa, Canada; Dr. Harry Goldmann, Baltimore, Md.; Dr. Frederick W. Goodrich, Jr., New London, Conn., and Dr. Max Koenigsberg, Charleston, W. Va.

Held over for the *Executive Council* are: Dr. Mortimer D. Sackler, '61, New York, N. Y.; Dr. Rudolf Dreikurs, '62, Chicago, Ill.; Dr. I. Phillips Frohman, '63, Washington, D. C.; and Dr. Kenneth W. Teich, '63, Duluth, Minn.

Items and Reports of Interest and Notes on Training

The problem of GP psychiatric education has received increasing recognition. Over 50% of the District Branches of the American Psychia-

tric Association now have committees that are working with the American Academy of General Practice.

The Northern California Psychiatric Society has joined up with the San Mateo Mental Health Services and the Stanford University Department of Psychiatry to work out a discussion type of course for family physicians.

The practical management of emotional problems in mental illness was a major area of investigation at the twelfth annual meeting of the American Academy of General Practice in Philadelphia. One of the features was a live telecast of interview techniques by Dr. B. Wheeler Jenkins, president of the Philadelphia Chapter of the A.A.G.P. Between interviews, comments and observations on the techniques were made by Dr. Robert A. Matthews, Chairman of the Department of Psychiatry at Jefferson Medical College.

At the Jewish National Home for Asthmatic Children in Denver, an intensive program for the care of intractable asthma is provided. The parents of the children participate in group therapy in New York under the leadership of Dr. H. H. Abramson and Dr. M. M. Peshkin. Dr. Peshkin is a Fellow of the Academy, a member of the Executive Council and has served as Historian.

Dr. Eric Wittkower, psychiatrist and retiring president of the American Psychosomatic Society noted the failure of physicians, other than psychiatrists, to take the lead in the field of psychosomatic medicine. A good trend, noted by Dr. Wittkower at the annual meeting of the Society in Montreal, was that present research papers presented at the meeting aimed at validating psychiatric theory by laboratory methods. He also stated that psychosomatic medicine, because of the predominance of contributions by psychoanalysts was becoming a "narrow psychiatric specialty" rather than a "comprehensive holistic approach."

Members of the Academy who would like to obtain a one-hour taped Auto-Digest of the 1959 meeting can obtain it by writing to Mr. Joel Jepson, Smith, Kline and French Laboratories, 1500 Spring Garden Street, Philadelphia 1, Pa. These tapes were prepared by S.K.F. and are distributed free of charge.

Psychiatrists and internists living in the New York area who are willing to work one morning a week (Fridays) in the newly created Psychosomatic Clinic at Maimonides Hospital of Brooklyn, should contact the editor. Maimonides Hospital is affiliated with the State University Medical Center. It is one of the few institutions that offer this opportunity to work with psychosomatic problems. Both psychiatrists and internists are currently needed.

Academy News Notes

DR. NORMAN H. MELLOR of Corona, California, spoke on "Hypnosis in Juvenile Delinquency" before the Panel on Hypnosis at the Pan American Medical Association Congress, Mexico City, on May 4, 1960.

DR. LOUIS J. FEIT of New York City is the President Elect of the American Otorhinologic Society for Plastic Surgery.

DR. MILTON GROSS, Director, Department of Biochemistry, Margaret Hague Maternity Center, Jersey City, received the E. R. Squibb & Sons Prize Paper Award of the American Society for the Study of Sterility. The award winning paper was entitled "Cyclic Changes in the Biochemistry of the Female Reproductive Tract."

DR. BERTRAM B. MOSS of Chicago was a discussant on the Panel of Medicolegal Problems sponsored by the Illinois Academy of Criminology at their annual institute in May. He was re-elected Secretary of the Illinois Academy of Criminology for the fifth year.

DR. JEROME M. SCHER of Chicago is the Editor of the *Journal of Existential Psychiatry*, the organ of the American Ontoanalytic Association.

DR. OSCAR L. MORPHIS of Fort Worth, Texas, spoke before the American Society in San Juan, Puerto Rico, on "Pain Control with Hypnosis."

DR. LEO WOLLMAN of Brooklyn was recently elected President of the Metropolitan New York Society of Clinical Hypnosis. He has also been elected to fellowship in the American Society of Clinical Hypnosis, has been awarded honorary membership in the British Society of Medical Hypnotists and has received certification by the American Board of Medical Hypnosis in Obstetrics and Gynecology. His paper "The Role of Hypnosis in the Treatment of Infertility" was recently published in the *British Journal of Medical Hypnotism* and another paper "Hypnosis in Weight Control" has been accepted for publication in the *American Journal of Clinical Hypnosis*.

The Editor notes with sorrow the passing of DR. JEROME M. GREENHOUSE of Hollywood, Florida. He joined the Academy in June 1955 as an Associate Fellow and was advanced to Fellowship in March, 1958.

Abstracted from the Medical Press

FALLING ASLEEP OPEN-EYED DURING INTENSE RHYTHMIC STIMULATION. Ian Oswald, Brit. Med. J., No. 5184:1450-1455, May 14, 1960.

Pavlov wrote "internal inhibition and sleep are fundamentally the same process" (1928). This inhibition was evoked in the cerebral cortex by any sensory stimuli to which, from the point of view of well-being, it was better that there should be no response. "External inhibition" referred to the disorganization of the task undertaken, by an unexpected and distracting stimulus. Pavlov originally experimented on dogs; Oswald on human volunteers, recording electroencephalographic and other physiological variables. He found that (a) signs of sleep appeared in persons subjected to repeated strong electric shocks, (b) signs of sleep could come and go rhythmically in time with regular stimuli at intervals of only a few seconds, (c) signs of sleep appeared while subjects continued to move in time with prolonged, rhythmic music. An example of the latter would be a prolonged tribal dance. Fascination or "animal hypnosis," like that of small animals fascinated by the look of a serpent, is a related phenomenon. Children, especially during febrile illness, may be seen asleep with their eyes open.

Reliable signs of sleep in a normal person are electroencephalographic, slowing of the heart (Boas 1932) and pupillo-constriction (Kleitman 1939). The transition from wakefulness to sleep is a gradual and continuous, not an abrupt, discontinuous process.

The subjects were paid volunteers who were physically and psychologically normal, with known waking and sleep electroencephalographic tracings. None had a history of narcolepsy.

Stimuli were (1) visual, i.e., four sixty-watt electric-light bulbs; (2) electric shocks rhythmically charged to 300 volts; and (3) the background was dominated by one major rhythm of a 60-minute tape-recording of non-stop "Blues" music. The eyes of all subjects were fixed open by adhesive tape and collodion. A kettle was kept boiling in the room to minimize corneal drying.

The results showed that the subjects went to sleep during simultaneous, synchronized, rhythmic electric shocks, loud rhythmic music, and strong flashing lights. The subjects were aware of having gone to sleep for varying time periods. The significance of these observations is important in the correlation of almost inevitable occurrence of similar brief episodes of light sleep in automobile or truck drivers who are exposed to prolonged monotonous sensory stimulation.

Leo Wollman, M.D.
Brooklyn, New York.

HYPNOSIS IN CLINICAL PRACTICE. Symposium and Panel Discussion. Hyman S. Barahal, M.D., Moderator; Herbert Spiegel, M.D., William E. F. Werner, M.D., Arthur Shapiro, M.D., Panelists. N. Y. St. J. Med., 60: 1586-1602, May 15, 1960.

This is a symposium and panel discussion presented at the 153rd annual meeting of the Medical Society of the State of New York. The moderator points out that the subject of hypnosis has been widely discussed, and a great deal of controversy has arisen over its uses, abuses, dangers, indications, and contraindications. He further points out that this technic has played a valuable role in teaching unconscious activities and has been a useful tool in research on mental functioning. He emphasizes that "despite many fantastic and unwarranted claims, hypnosis has played a lesser role therapeutically," and that "there are many unrecognized borderline schizophrenic persons in the general population, and hypnotically produced delusions and hallucinations may be the very stimuli that brings such individuals into a more readily expressed psychotic state." He further goes on to state: "It is in the field of the 'symptom cure,' however, that the greatest danger lies. Hypnosis has been recommended and is used extensively in the treatment of alcoholism, obesity, nail-biting, enuresis, insomnia, excessive smoking, stuttering, stage fright, and many other conditions."

Dr. Spiegel discusses "The Value of Hypnosis in Psychiatric Disorders." Dr. Werner discusses "The Value of Hypnosis in Obstetrics," and Dr. Shapiro, "The Value of Hypnosis in Internal Medicine." The whole is ended up with a period of questions and answers, which concludes with the statement that "the role of hypnosis may become fuzzy, thereby allowing the patient to generalize spontaneously into long-repressed symptoms or phantasy expectations of himself. The safeguard against this is to define carefully and to circumscribe for the patient the specific purpose of the hypnotic intervention. For those not in a deep trance the danger is less because the individual defenses are readily accessible."

James L. McCartney, M.D.
Garden City, N. Y.

ON SCIERNEUROPSIA: A PREVIOUSLY UNNAMED PSYCHOGENIC VISUAL DISTURBANCE. Peter A. Martin, M.D., J. Amer. Psychoanalytic Assoc., 8:71-81, Jan. 1960.

Three patients reported their visual disturbances in terms of light perception. Objects appeared dim; brightness was no longer present; and they felt that more light was needed to see the objects. Martin proposes the term scierneuropsia to designate a psychogenic visual disturbance in which objects appear to be in a shadow.

T. F. Schlaegel, Jr., M.D.
Indianapolis, Indiana

AN ACADEMIC PSYCHOLOGIST LOOKS AT NATURAL CHILDBIRTH. Virginia L. Senders, Obs. & Gyn., 14:817, Dec. 1959.

The author, using her own experience in labor and delivery as a springboard, attempts to explain the psychological mechanisms responsible for the "typical behavior of a prepared patient undergoing natural childbirth."

Her springboard is anchored on "almost universally accepted principles of academic (laboratory) psychology," and proves to be of such resilience that she concludes that "we need not attribute any qualities to parturient women that cannot also be found in hungry male rats."

It seems that if a chimpanzee receives a poker chip after he lifts a heavy weight, and he keeps on doing this, then by extrapolation, "we must infer" that the poker chip is rewarding and satisfying to the animal. I don't know why we can't infer with equal validity that the chimp would just rather lift weights than sit around doing nothing, but if we did that then we wouldn't have any principle of reinforcement. This last is what we do have when "an organism tends to repeat a response that is followed by a satisfying state." From here we proceed to the principle of secondary reinforcement, discriminative stimulus (this is what a sign that says, "Boston Next Right" is, if you want to go to Boston), gradient of reinforcement, major subgoal, etc., etc. All of these terms can be used to describe the behavior of rats in mazes and laboring women. Has anyone here seen Occam's razor? I would like to lend it to the academic psychologists.

If you want to explain the behavior of the prepared patient in labor, all you have to do is to identify their responses and label them with the appropriate terms. By so doing, you justify the prenatal preparation, especially if the patient "overlearns" her role. (This means learning more than the bare minimum, like getting an "A" in the course.)

Thus the author offers those of us who would like to understand our pregnant patients, another cubbyhole in which to file our observations. In addition to Read's Mysticism, Freudian Masochism, Pavlovian Conditioning, and Hypnosis and Suggestion we now have Apes, Rats, and other Carnivora. The author states, "But no scientist seeks a complicated explanation where a simple one will do." Well, I have a simple one: perhaps people, including parturient women, enjoy things more if they know what they're doing.

F. W. Goodrich, Jr., M.D.
New London, Conn.

ATTITUDE AND RESPONSE TO TREATMENT OF ADOLESCENTS AND ADULTS WITH DYSMENORRHEA. L. Sabolsky and P. Glanzberg, J.A.M.W.A., 14:415-418, May 1959.

This is an interesting report on a twelve month study on 142 dysmenorrheic patients: 102 adolescents and 40 adults, each observed for at least three consecutive menstrual periods.

The purpose of the study was to determine the correlation between mental attitude and severity of symptoms and response to treatment.

The results indicate, according to the authors, that a definite positive relationship exists between fear of impending menstrual pain and the intense symptomatology and increased resistance to treatment for dysmenorrhea.

Leo Wollman, M.D.
Brooklyn 24, New York.

PSYCHOSOMATIC ASPECTS OF TEMPOROMANDIBULAR JOINT DYSFUNCTION. William L. Kydd, J.A.D.A., 59:31-44, July 1959.

The problem of the malfunctioning temporomandibular joint is essentially a psychobiological problem. Of 30 subjects with temporomandibular joint syndrome, 23 were emotionally disturbed. The oral, physical and emotional status of patients with this syndrome should be evaluated. In the emotionally disturbed, relief can be affected only when situations threatening the subject's security have been removed, and appropriate occlusal adjustments have been made when indicated. Radical procedures should be postponed until conservative therapy has been utilized.

On the basis of cases of temporomandibular joint dysfunction reviewed in this study, it can be said that the occlusal dysfunction is usually not serious or extreme. Extreme occlusal dysfunction was present in less than 25 per cent of the subjects evaluated in this series.

Thirty subjects with temporomandibular joint syndrome (29 with non-inflammatory disturbance of the normal function of this joint, one with

an inflammatory disturbance) were evaluated as to occlusal relation of maxillomandibular dentitions, as well as emotionally and electromyographically.

Electromyographic evaluation illustrated that in 29 of the 30 subjects, action potentials disappeared when the subject was comfortable and the subject's skeletal musculature was relaxed and at ease in the test environment.

The emotional evaluation disclosed that 23 (76%) of the subjects were significantly emotionally disturbed.

The intrinsic oral trauma from malocclusion appears to have enhanced etiologic significance in the origin of the temporomandibular joint syndrome when it took place in the setting of a threatening life situation emanating from difficulties in social and interpersonal adjustments which engendered generalized skeletal muscle hyperfunction.

When incorrect cuspal guidance either laterally, anteriorly or posteriorly, is corrected, it may affect a temporary remission of symptoms in the subject with temporomandibular joint dysfunction. Extended relief can be affected in the emotionally disturbed only when situations threatening the subject's security have been removed.

It would seem that radical procedures such as condylectomy, injection of the joint with psylliate sodium or hydrocortisone should be postponed until a more conservative approach has been utilized thoroughly. Under the conservative approach to treatment should be included: 1) occlusal equilibration or occlusal splinting plus emotional support, 2) use of tranquilizers as a temporary adjunct to treatment during the acute phase, and 3) psychotherapy when indicated.

Melvin Land, D.D.S.
Dallas 14, Texas.

HYPNOSIS AND PAIN. Eugene A. Kaplan, A. M.A. Arch. of Gen. Psychiat., 2:567-568, May 1960.

Numerous articles have been appearing on the use of hypnosis, and most of the reports have been overly optimistic. After several months of these reports, we are now encountering articles in the medical literature which are becoming increasingly cautious.

This article evaluates hypnosis and pain. "The clinical criterion of 'success' usually has been the patient's report of relief from or absence of pain, or his submission without protest to procedures which without this hypnotic intervention would presumably be experienced and reported as painful." Dr. Kaplan concludes that hypnosis does not relieve pain in the sense of removing it, but causes the patient to deny its presence. The patient still experiences discomfort, which could be relieved by chemical anesthetics or analgesics, and that it would be more appropriate to use these types of agents when possible. He states: "It is the physician's task to relieve suffering rather than displace it."

James L. McCartney, M.D.
Garden City, N. Y.

THE PHYSICIAN AS ADVISOR TO FAMILY OF THE MENTALLY RETARDED CHILD. Herman M. Jahr, M.D., Nebraska St. Med. J., 44:578-581, December 1959.

This article was read before the annual session of the Nebraska State Medical Association in May 1959. It emphasizes the importance of early recognition of mental retardation; reviews some of the important criteria which may be indicative of limited intellectual capacity in the child; and suggests a program of parent counseling based on the present concept of the problem.

The author stresses the physician's role in helping the family deal with the problem. The physician should not take upon himself the entire responsibility for definitive diagnosis or care of the mentally retarded child, since the complexity of the condition calls for technical skills and knowledge contributed by other disciplines. The mildly retarded child presents a special challenge because timely recognition of his disability followed by appropriate training and education offers possibilities for community usefulness in later years.

Dr. Jahr's treatment of this delicate subject should be decidedly helpful to physicians who are confronted with the painful necessity of making the diagnosis of mental retardation, determining its extent, and advising the parents.

Anthony R. Tortora, M.D.
Brooklyn, N. Y.

PSYCHOGENIC VISUAL DISTURBANCES. Jerome M. Schneck, M.D., N. Y. State J. of Med., 59:2031-2031, May 1959.

Three cases are reported: the first patient complained of a film or veil over the field of vision, the second of intermittent blurring, and the third of blindness. The first patient had had the film for two years. She had a feeling of separation from others with which this film or veil was equated. The second patient, who was seen primarily for his anxiety, was impressed by the emptiness of his life and had begun to look about him and notice things in which he had previously

shown no interest. His blurring of vision occurred only when the patient focused on certain objects which he was seeing in a new light. In other words, this selective blurring was a psychologic representation of his striving to see himself in a new perspective. The third case complained of blindness but was able to see a light several feet in front of her. During the interview her sight returned. Later, when her husband came into the room, her sight again faded and was associated with feelings of hatred for him.

T. F. Schlaegel, Jr., M.D.
Indianapolis, Indiana

SEXUAL ACTIVITIES AND ATTITUDES IN OLDER PERSONS. Gustave Newman and C. R. Nichols, J.A.M.A., 173:33-35, May 7, 1960.

Data on the sexual activity of 250 volunteer subjects over sixty years of age in a North Carolina community dispelled the prevalent notion that older people have no sexual appetite. Fifty-four per cent of married persons in the group were active sexually. The average age was 70 years old. Subjects were caucasoid and negroid men and women. Negroid were more active than caucasoid, men more active than women, and persons of lower socio-economic status more active than those of higher status. There was a positive correlation between sexual activity in earlier life and sexual activity after sixty.

Leo Wollman, M.D.
Brooklyn 21, New York.

THE USE OF RITALIN IN PSYCHOTHERAPY OF DEPRESSIONS OF THE AGED. A. Jacobson, Psych. Quarterly, 32:474-483, July 1958.

In a controlled study in which 27 patients in the 6th and 7th decades of life received methylphenidate (Ritalin) and a comparable group received a placebo, to study possible effects on their accessibility to psychotherapy, some facilitation of communication occurred. Twenty-two of the 27 on Ritalin showed slight to marked improvement; on the placebo, only 11 showed minimal to moderate improvement.

The author was impressed with the increase in alertness, the loss of early morning depression and fatigue and the lack of evidence of addiction. The dosage used was 10 to 30 mg. TID during the first eight hours of the day.

SUICIDE AND THE MEDICAL COMMUNITY. Motto, J. A. and Greene, C., Arch. Neur. and Psychiat., 80:776, Dec. 1958.

Motto and Greene investigated the degree of contact between suicidal persons and the medical community in San Francisco in 175 consecutive suicides and 197 unsuccessful attempts from Nov. 1956 to September 1957. At least 40% of those who succeeded, and 60% of those who attempted it were under medical care, or had been within six months preceding the act. At least one out of six who committed suicide had been seen by a doctor within the preceding 30 days. One out of three killed himself with a drug available only by prescription. In the reports of 372 total cases, the physicians involved represented general practice and every medical specialty except pediatrics. General practice, psychiatry and internal medicine accounted for about half of the doctors.

Depression is not always the predominant complaint before suicide. A history of prior suicide attempts is a danger signal. Whether attempted or threatened, suicidal behavior must be taken seriously. According to the authors the physician's own anxiety may add to the difficulty of clearly evaluating the patient's emotional state.

MEANS OF INTEGRATING APPROACHES TO HUMAN BEHAVIOR. M. E. Jarvik, M.D., Dis. of the Nerv. System, Vol. 21, No. 2, Sect. 2, pg. 9-22, Feb. 1960.

Awareness of the relationship of genes, enzymes and body chemistry to human behavior is assuming increasing importance. In phenylketonuria, a hereditary lack of an enzyme system for metabolizing phenylalanine produces severe mental deficiency which is treated by dietary restriction of phenylalanine. If similar biochemical defects can be discovered in the major psychoses, rational chemotherapy may eventually be provided that will prove even more efficacious than present tranquilizers and antidepressants.

Improvements in the technique of examining chromosomes led to the discovery of an extra chromosome in mongolism (47 instead of the normal 46). Similarly in Klinefelter's Syndrome, individuals of the male sex were found to have the chromatin structure of females.

The chemistry of the body is an important factor in controlling behavior (Claude Bernard's concept of "fixity of the internal milieu" and Cannon's "principle of homeostasis").

Drugs are useful means of understanding behavior. There is a marked individual variability in susceptibility to the action of drugs that affect the central nervous system, which may be related to innate differences in the CNS. Differences in drug susceptibility may be related to metabolic and genetic differences.

In this age of specialization, behavior is viewed by various disciplines differently. Psychiatrists must join forces with experimental psychologists, physiologists and geneticists.

HYPERINSULINISM. R. Menguy, M.D., J. Okla. M. A., 52:797-804, Dec. 1959.

Hyperinsulinism may be responsible for vague and nonspecific symptoms such as: loss of consciousness, confusional states, weakness, fatigue, deep coma, sweating, drowsiness, stupor, lightheadedness, visual disturbances, amnesia, clonic convulsions, noisy behavior, and headache. Diagnoses such as epilepsy, psychosis or alcoholic inebriation are frequently considered. If the condition is produced by a tumor of the islets of Langerhans of the pancreas, surgical treatment is indicated.

The classical symptoms (Whipple's triad) include attacks of hypoglycemia associated with fasting or exercise, accompanied by a blood sugar level of less than 50 mg./100 c.c., and relief by the administration of glucose.

TORULOSIS. M. G. F. Donnan, J. Fac. Radiol., 10:17-20, Jan. 1959.

The portal of entry in torulosis (cryptococcosis) may be the skin, intestinal tract, or respiratory tract, the last being the most common. Involvement of the brain and meninges is almost uniformly fatal.

In one of the two fatal cases reported by the author, the first symptoms were sudden loud cries, clumsiness in eating, and the exhibition of erratic acts. Routine examination at first elicited no abnormalities, but later no tendon reflexes were obtained; there was also papilledema and optic atrophy. Her mental state deteriorated, necessitating hospitalization. Cryptococci were found on direct smear of the cerebrospinal fluid.

Another patient, who had dated his symptoms of left sided hemiparesis and hemianaesthesia from an accidental blow to the face eight months previously, also had a history of right lower lobectomy for bronchiectasis, which had occurred five years previously. Roentgenoscopy of the skull suggested the possibility of a space-occupying lesion; there was no papilledema nor abnormalities in the cerebrospinal fluid. Several months later headache, diplopia and vomiting occurred which preceded the onset of coma and death.

Book Reviews

BEST-FED BABIES by Bernice C. Stewart, M.S., with the cooperation of the Association for Childbirth Education, Seattle, Washington. Can be obtained at the Association for Childbirth Education Y.W.C.A., 1118 - 5th Avenue, Seattle, Washington. $1.00.

This useful little 36-page monograph on breast feeding is an excellent hand book for the mother who may decide to nurse. Very little factual or useful material prepared in the way of a nursing handbook for new mothers exists. This is Mrs. Stewart's effort, through the use of both visual and textual material, to explain the mechanics as well as the esthetics of breast feeding. Some 315 mother from Seattle and Milwaukee contributed their personal experiences to the production of this little monograph. One of its more valuable aspects is the question and answer section which covers subjects so esoteric as the influence of alcohol upon the nursing mother. While topics such as this are not the main content of the book, they do demonstrate the broad field which Mrs. Stewart has covered.

While one may take exception to some of the philosophy stated, the book is nonetheless very informative. It has been our personal experience that it is of dubious wisdom to emphasize to every mother that she should nurse her baby. In the event that the mother has a premature baby, cracked nipples, or some other mechanical problem preventing her nursing, she is only too often left with the feeling of being an inadequate mother or with feelings of guilt. We would much rather suggest that this is an excellent source for any physician or his patient to read in the event that she should be interested in the physiology of nursing as it is described by the author who is both a mother and nurse.

Robert N. Rutherford, M.D.
Seattle, Wash.

PSYCHOANALYSIS AND HUMAN VALUES. Jules H. Masserman, M.D., Editor. New York and London: Grune & Stratton, Inc., 1960. 377 pages. $11.00.

This volume is a compendium of papers presented before the Academy of Psychoanalysis at its Philadelphia and New York meetings, and the editor is Dr. Masserman, Professor of Neurology and Psychiatry of Northwestern University. There are forty-two contributors. In the first paper, it is stated that: "In the field of psychosomatic medicine, psychoanalysis has provided impetus to inquiry into many areas of physical disorder and has contributed significantly to a conceptualization of physical illness and 'illness susceptibility.' . . . Freud's original inquiries into the dynamics of mental illness and personality structure have provided an almost inexhaustible source of material for the inquiries of the research worker in many fields. Psychoanalysis has drastically modified the nature and direction of inquiry in the social sciences and, in increasing measure, in physiological research in which parameters including environmental and psychological elements are now considered." Zilboorg points out on page 270 that "It is evident that the moral fiber of the analyst is under greater stress than that of any other medical specialist. This is so much more true because the analyst's work has a more than serious effect on human relations; the effect is direct and potent and yet almost entirely elusive. The effect of the psychoanalyst's personality on the patient and the effect of psychoanalysis on the patient are conglomerated with many external circumstances, social and individual and not lending themselves to the understanding of even the most sagacious sociologist or psychologist."

Each paper is followed by references, and each of the six groups of papers is followed by discussions. The whole book is well indexed, both for names and subjects. Any physician interested in up-to-date opinions on the subject of psychoanalysis will find this book worthy of a review.

James L. McCarthney, M.D.
Garden City, N. Y.

THE EGO IN LOVE AND SEXUALITY. Edrita Fried, Ph.D. New York and London: Grune & Stratton, Inc., 1960. 296 pages. $5.50.

The author of this book is the Senior Supervisor at the Postgraduate Center for Psychotherapy in New York City, and Assistant Professor of Psychiatry at the Albert Einstein College of Medicine. This book is well written and puts the emphasis on the hole that the passions and impulses play in ego development. Any physician interested in human motivations and the problems of sexual behavior will find this book most stimulating.

The book is divided into twelve chapters: "Sexuality as the Experience of Change," "Ego Regression in Sexuality," "Hostility as a Defense Against Love and Sexuality," "Unresponsiveness: A Form of Self-Protection," "Narcissistic Isolation: Quest for Similarity and Self-Repetition," "Homosexuality as a Disturbance in Human Relations," "Masturbation in Adults," "The Aims of Visual Curiosity," "Causes and Consequences of Clinging Between Mates," "Repeating Child-

hood Experiences in Adult Sexuality and Love: A Review of the Oedipus Complex," "The Pains of Boredom," "Constancy and Change," which indicate the exhaustive nature of the author's discussion. She points out that "Human beings, as they grow and develop, gradually acquire a variety of powers. They learn how to reason, how to organize their thoughts, their feelings and their lives; they discover how to exercise control over the world outside and the world of their own inner experiences. These skills—reasoning, organizing and control—and many others make up the entity that we call the human ego. Love and sexuality move the world. They produce experiences that are indispensable for survival." Throughout the book, she illustrates all points with case reports which are well presented.

On page 278, she points out: "Successful monogamy requires highly developed mates whose psyche and body can reconcile the need for steadiness with the need for change. Changes come about 1) through exploring and enjoying the external world in an adventurous way, and 2) through psychological vivacity and variability. Panoramic feelings, thoughts, motivations, actions and sexual experiences are developed in contact with a mate who is similarly capable of change. New partners need not be sought if inner experiences are constantly rejuvenated."

At the end of the book is a list of references according to chapters, and the whole is well indexed.

James L. McCartney, M.D.
Garden City, N. Y.

CHILDBIRTH WITHOUT PAIN. By Dr. Pierre Vellay and others. E. P. Dutton & Co., Inc. 1960. 216 pgs. $3.95.

Dr. Vellay is a former associate of the late Dr. Fernand Lamaze who brought the Pavlovian psychopropylactic method of childbirth back to France from Russia in 1951. The basis of the "method" is the conditioned reflex of Pavlov as applied to women in labor. Education of the pregnant woman for childbirth, and physical training including relaxation are utilized to "condition" the patient so that she may deliver without pain. Additionally she is attended during labor by ancillary personnel who are skilled in the physiotherapeutic techniques and offer her support. The author stresses the difference between this approach and that utilized by those who advocate "natural childbirth." He believes that this is a more positive approach because it is based on neural mechanisms described by Pavlov.

The book is a translation from the French and consists of the lectures and exercises which are given to the patients. It includes many case reports as well as a theoretical discussion of the method.

This book should be of interest to anyone who practices obstetrics with a psychosomatic orientation. The exercises are different from those taught to pregnant women in this country and one wishes that they had been described more fully and perhaps in a separate and more organized fashion. There are many ideas which are worthy of consideration and application. This reviewer feels that the differences between this approach and that of the "Read" method are more apparent than real, and are perhaps more of a semantic than a physiological nature. We do not know all we should know about the psychology of reproduction, and our approach to the pregnant woman can always stand improvement and new ideas.

Frederick W. Goodrich, Jr.
New London, Conn.

GENERAL PSYCHOTHERAPY. By John G. Watkins, Ph.D. Springfield, Illinois: Chas. C. Thomas, 1960. 255 pages. $9.25.

This unusual book is a well organized study guide of various psychological treatments. It is a sincere attempt, and a successful one, to bring order out of the confusion of theories that pervade the field of psychotherapy.

Dr. Watkins has designed the book as an outline and guide rather than to add another ponderous text book to the literature. It will provide the reader the means of obtaining further knowledge of all possible approaches in that it provides an extensive bibliography every step of the way. *W.D.*

THANK YOU, DR. LAMAZE. By Marjorie Karmel. J. B. Lippincott Company. 1959. 188 pgs. $2.95.

It is always interesting and often valuable for doctors to have first hand reports from their patients on the results of therapy. When the therapy is psychosomatically based and the patient is as objective as Mrs. Karmel the report is doubly valuable. The author describes her experiences during pregnancy and labor with the Pavlovian psychoprophylaxis as practiced by the obstetrician who imported it to France from Russia, the late Dr. Fernand Lamaze. This is a complete account, not only of the method but of the reactions to it of a healthily skeptical American girl. Mrs. Karmel is a convert and rightly so. The second part of the book describes her experiences in a second pregnancy in this country and includes an account of her attempt to find a sympathetic obstetrician. This is a penetrating analysis, written with insight and hu-

mor, of some archetypes of the modern physician. One hopes they are not the standard models.

This book should be required reading for any doctor who practices obstetrics, first because of the new ideas (in this country at least) which are presented, and second, because it describes some of us as our patients see us. It is not often that we have this chance to read such a penetrating account.

Frederick W. Goodrich, J., M.D.
New London, Conn.

BASIC ISSUES IN PSYCHIATRY. By Paul V. Lemkau, M.D. Springfield, Ill.: Chas. C. Thomas, 1959. 105 pages.

This book, written for the general physician, emphasizes the fact that the present trend towards post-graduate psychiatry for the G.P. is one of the most significant events in medical education in recent decades.

In Chapter 1 the size and range of mental health problems are considered. Current statistics place the figure as one bed for every 200 of the general population. One of every 12 children born is destined to spend some time in a mental hospital. In studies made of sample populations, apparently between 30 and 50% have sufficient symptomatology to warrant treatment—an indication that psychiatric treatment must be a major concern for the general physician.

Chapter 2 deals with the prevention of psychiatric illness due to brain damage. Included are infectious processes, such as meningococcic meningitis, where the author makes a plea for early diagnosis and rapid treatment in order to prevent permanent damage. Encephalitis, influenza, Q fever, and Icelandic disease can all result in long "convalescences" characterized by weakness and depression, which too often are diagnosed as purely psychogenic. Obstetrical complications produced by anoxia can result in severe brain defect, mental deficiency and behavior disorders in children.

In Chapter 3, devoted to prevention of psychogenic illness, the author considers the effects of isolation in both infants and adults. He reviews the work of Cannon, Pavlov, and Gantt and emphasizes the value of preparation for acute stress as a means of preventing mental illness.

In Chapter 4, on treatment, psychotherapy is considered to be analogous to the bed rest prescribed in the treatment of other kinds of illness, for regardless of the etiology of the psychiatric illness, psychotherapy will have to be used.

In Chapter 5, dealing with administration, the isolation of psychiatry from medicine is deplored and hope is expressed that this trend is now undergoing radical changes.

W.D.

MILESTONES IN MODERN SURGERY. Edited by Alfred Hurwitz, M.D., and George A. Degenshein, M.D. New York: Hoeber-Harper, 1958. 520 pgs. $15.00.

This is a most unusual and exciting book in that it has culled from the past the original papers that have been milestones in the development of the present golden age of surgery. The original purpose of the book was to fill a gap in the training of residents, where the emphasis on current literature provided too little time to seek out the contributions of the recent and remote past. As the work progressed, the authors became increasingly aware that the past and the present were in a continuum—a fact that is in keeping with the principles of good psychodynamics.

Among the many milestones considered, most interesting are the following: the contributions of Ambroise Pare; the discovery of anaesthesia; the importance of the "milieu interieur" (an excellent review of present concepts of electrolyte balance); the discovery of the use of sodium citrate as an anti-coagulant, which made blood banks possible; the bodily changes in surgical convalescence (an excellent study of biochemical, endocrine and metabolic changes which is right up to date); excerpts from the operative story of goitre; surgery of the head and neck, with special reference to Crile's plan of dissection; operations for carcinoma of the breast; the surgery of hernia (Bassini's original repair); surgery of the gastro-intestinal tract (Bilroth); the early diagnosis of intestinal obstruction (Wangensteen); the first successful resection of the thoracic portion of the esophagus for carcinoma; cardiovascular surgery (Alexis Carrel); an operation for aneurysm (Rudolph Matas); the surgical treatment of mitral stenosis; and a most significant contribution, entitled "The Soul of the Surgeon." The latter is a plea for the surgeon to be humble; to wonder what satisfaction can ensue if after a brilliant operation the patient dies because of an accelerated spread of the cancer. It stresses the fact that a well-trained technician is not sufficient; that surgeons must have not only a conscience but human understanding, and that these attributes should not sacrifice the need for scientific rigor or detail.

This book will unquestionably meet the scientific needs of the surgeon who would dip into the recent and remote past to increase his basic knowledge of surgery and surgical techniques. More important is that it implants, in a most inocuous way, the need for the development of the surgeon's awareness of the individual patient as a person and not as merely another case.

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